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Sixth report on the protection of persons in the event of disasters

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I. Introduction

1. At the sixty-fourth session of the International Law Commission, in 2012, the Special Rapporteur submitted his fifth report on the protection of persons in the event of disasters (A/CN.4/652). He provided therein an overview of the views of States and organizations on the work undertaken by the Commission to date, in addition to an explanation of his position on the Commission's question in chapter III.C of its 2011 annual report (A/66/10). The report contained a further elaboration of the duty to cooperate and a discussion of the conditions for the provision of assistance and of the question of the termination of assistance. Proposals for the following three further draft articles were made in the report: A (Elaboration of the duty to cooperate), 13 (Conditions on the provision of assistance) and 14 (Termination of assistance).

2. The Commission considered the fifth report at its 3138th to 3142nd meetings, from 2 to 6 July 2012, and referred all three draft articles to the Drafting Committee. The Drafting Committee also had before it draft article 12 (Right to offer assistance), proposed by the Special Rapporteur in his fourth report (A/CN.4/643 and Corr.1), the consideration of which it had been unable to conclude at the sixty-third session, in 2011, owing to a lack of time.

3. The Drafting Committee, in the light of the discussion held by the Commission in plenary meeting, provisionally adopted the following five additional draft articles: 5 bis (Forms of cooperation), 12 (Offers of assistance), 13 (Conditions on the provision of external assistance), 14 (Facilitation of external assistance) and 15 (Termination of external assistance).

4. The five draft articles were submitted to the Commission in plenary meeting in a comprehensive report presented by the Chair of the Drafting Committee at the 3152nd meeting of the Commission, on 30 July 2012. Owing to a lack of time for the subsequent preparation and adoption of the corresponding commentaries, the Commission at that meeting took note of draft articles 5 bis and 12 to 15 as provisionally adopted by the Drafting Committee. The five draft articles were reproduced in a Commission document (A/CN.4/L.812) and in the Commission's report on the work of its sixty-fourth session (A/67/10, footnote 275).

5. In November 2012, at the sixty-seventh session of the General Assembly, the Sixth Committee considered the chapter of the Commission's annual report devoted to the Special Rapporteur's fifth report and the Commission's debate thereon, particular attention being given to draft articles 5 bis and 12 to 15, as adopted by the Drafting Committee. Some delegations, for their part, concentrated on draft articles A, 12, 13 and 14 as originally proposed by the Special Rapporteur. A summary of the debate of the Sixth Committee, prepared by the Secretariat at the request of the Assembly (resolution 67/92, para. 32), has been circulated in document A/CN.4/657 (chapter II.B).

6. According to the syllabus supporting the recommendation for inclusion of the present topic in the Commission's long-term programme of work,[1] the focus of the topic would be "the undertaking of activities aimed at the prevention, and mitigation of the effects, of ... disasters as well as ... the provision of humanitarian relief in the immediate wake of ... disasters".[2] The syllabus considered "largely relevant today"

[1] A/61/10, annex C.

[2] Ibid., para. 1.

the classification made in General Assembly resolution 46/182, adopted in 1991, of key activities undertaken in this area, which extended to disaster prevention, mitigation and preparedness including through enhanced early warning capacities.[3] The syllabus also made reference to the findings of the High-level Panel on Threats, Challenges and Change in 2004, which identified the responsibility to prevent as one of the three specific responsibilities of the international community, considering it "the most pertinent to the topic at hand".[4] Thus, the scope of the topic *ratione temporis* would comprise "not only the 'response' phases of the disaster, but also the pre- and the post-disaster phases".[5] Moreover, the syllabus listed the principles of prevention and mitigation among the core principles underpinning contemporary activities in the realm of protection of persons in the event of disasters. With regard to the former, "States are to review existing legislation and policies to integrate disaster risk strategies into all relevant legal, policy and planning instruments, both at the national and international levels, in order to address vulnerability to disasters". With regard to the latter, "States are to undertake operational measures to reduce disaster risks at the local and national levels with a view to minimizing the effects of a disaster both within and beyond their borders".[6]

7. In 2008, in his first preliminary report,[7] the Special Rapporteur considered that, on the question of the scope of the topic *ratione temporis*, "a broad approach appears indicated as concerns the phases which should be included, in order to provide fully fledged legal space". He referred to "the wide range of specific issues to which providing disaster assistance gives rise through successive phases, not only of disaster response but also of pre-disaster and post-disaster: prevention and mitigation on the one hand, and rehabilitation on the other".[8] He concluded that, "to achieve complete coverage, work on the topic should extend to all three phases of a disaster situation, but it would appear justified to give particular attention to aspects relating to prevention and mitigation of a disaster as well as to provision of assistance in its immediate wake".[9]

8. In 2009, in his second report,[10] the Special Rapporteur suggested concentrating, at the initial stage of work, on response at the disaster proper and immediate post-disaster phase, while emphasizing that that was "without prejudice to the Commission addressing, at a later stage, preparedness at the pre-disaster phase".[11]

9. In 2012, in his fifth report,[12] the Special Rapporteur, summarizing the general comments made by the Sixth Committee in its debate on the Commission's 2011 annual report, recorded that it had been suggested that the proposed scope of the draft articles was too narrow with respect to the events to be covered and, therefore, it should be extended to a wider range of pre-disaster activities relating to risk

[3] Ibid., para. 6.
[4] Ibid., para. 10; see also A/59/565 and Corr.1.
[5] A/61/10, annex C, para. 27.
[6] Ibid., para. 34.
[7] A/CN.4/598.
[8] Ibid., para. 57.
[9] Ibid., para. 66.
[10] A/CN.4/615 and Corr.1.
[11] Ibid., para. 29.
[12] A/CN.4/652.

reduction, prevention preparedness and mitigation.[13] Also in that report, the Special Rapporteur touched upon the question of cooperation in disaster preparedness, prevention and mitigation, noting that "more recent conventions have shifted the focus from a primarily response-centric model to one focused largely on prevention and preparedness".[14]

10. In his concluding remarks at the end of the Commission's 2012 debate on his fifth report, the Special Rapporteur expressed his intention to devote his next report to prevention, mitigation and preparedness in respect of disasters.[15]

II. Prevention

A. Historical development of the concept of disaster risk reduction

11. The Office of the United Nations Disaster Relief Coordinator was founded in 1971. It was the predecessor of the present Office for the Coordination of Humanitarian Affairs. As early as 1973, it initiated a research project that culminated in an expert group meeting, held from 9 to 12 July 1979, bringing together scientists and planners specialized in the major natural hazards of meteorological, geological and geophysical origin. In its report studying in detail natural disaster and vulnerabilities,[16] the Expert Group concluded that "it is now also realized that the actual and potential consequences of natural hazards are becoming so serious and so increasingly global in scale, that much greater emphasis will henceforth have to be given to pre-disaster planning and prevention".[17]

12. Nearly a decade later, in 1987, the General Assembly focused on disaster reduction, citing increasing and grave damages and loss of life. In its resolution 42/169, it recognized "the responsibility of the United Nations system for promoting international cooperation in the study of natural disasters of geophysical origin and in the development of techniques to mitigate risks arising therefrom, as well as for coordinating disaster relief, preparedness and prevention, including prediction and early warning", and decided to designate the 1990s as the International Decade for Natural Disaster Reduction.[18] It also decided on five specific goals, including "to disseminate existing and new information related to measures for the assessment, prediction, prevention and mitigation of natural disasters" and "to develop measures for the assessment, prediction, prevention and mitigation of natural disasters through programmes of technical assistance and technology transfer, demonstration projects, and education and training, tailored to specific hazards and locations, and to evaluate the effectiveness of those programmes".[19]

13. In 1989, the General Assembly adopted an international framework of action for the International Decade for Natural Disaster Reduction, devoting one section to actions to be taken by the United Nations system. It declared that "the organs, organizations and bodies of the United Nations system are urged to accord priority,

[13] Ibid., para. 15, citing a statement by Poland (A/C.6/66/SR.21, para. 84).
[14] Ibid., para. 114.
[15] A/CN.4/SR.3142.
[16] UNDRO/EXPGRP/1.
[17] Ibid., foreword.
[18] General Assembly resolution 42/169.
[19] Ibid.

as appropriate and in a concerted manner, to natural disaster preparedness, prevention, relief and short-term recovery". It also recognized "the important responsibility of the United Nations system as a whole for promoting international cooperation in order to mitigate natural disaster, provide assistance and coordinate disaster relief, preparedness and prevention".[20]

14. In 1991, a year into the International Decade, the General Assembly adopted a landmark resolution, 46/182, containing in its annex guiding principles for humanitarian relief, preparedness, prevention and on the continuum from relief to rehabilitation and development.[21] It recommended that "special attention should be given to disaster prevention and preparedness by the Governments concerned, as well as by the international community".[22] Sections II and III of the annex focused on prevention and preparedness, proposing specific measures to be taken by the international community and States.[23]

15. In the same year, the General Assembly noted that already approximately 100 States were following the 1989 call to establish national strategies to achieve the objectives of the Decade, and endorsed a proposal to convene a world conference on natural disaster reduction to help to implement the International Framework of Action.[24] The Assembly agreed that the objectives of that conference were to review the accomplishments of the Decade, to increase actions and exchange and to "increase awareness of the importance of disaster reduction policies",[25] recognizing the role that disaster reduction could play for the improvement of emergency management in general and capacity-building for disaster preparedness and mitigation at the national level.

16. In 1994, the World Conference on Natural Disaster Reduction took place in Yokohama, Japan. Building on the midterm review of the Decade, it led to the adoption of the Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and Plan of Action.[26] In the Yokohama Message, the 148 participating States affirmed that "disaster prevention, mitigation, preparedness and relief are four elements which contribute to and gain from the implementation of sustainable development", recommending that "nations should incorporate them in their development plans and ensure efficient follow-up measures at the community, national, subregional, regional and international levels"[27] and calling for further improvements in early warning.[28] They affirmed that "disaster prevention, mitigation and preparedness are better than disaster response in achieving the goals and objectives of the Decade" and that "disaster response alone is not sufficient".[29] For the rest of the Decade and beyond, States were urged to "develop and strengthen national capacities and capabilities and,

[20] General Assembly resolution 44/236.
[21] General Assembly resolution 46/182, annex.
[22] Ibid., para. 8.
[23] Ibid., sections II and III.
[24] General Assembly resolution 46/149, para. 3.
[25] General Assembly resolution 48/188, para. 6.
[26] A/CONF.172/9, chap. I, resolution I, annex I.
[27] Ibid., annex II, para. 2.
[28] A/CONF.172/9, chap. I, resolution I, annex I, para. 5.
[29] Ibid., para. 3.

where appropriate, national legislation for natural and other disaster prevention, mitigation and preparedness".[30]

17. In 1999, the International Strategy for Disaster Reduction was launched as a follow-up to the International Decade for Natural Disaster Reduction and to develop the Yokohama Strategy and Plan of Action.[31] According to the secretariat mandated to oversee and guide the Strategy, the Strategy "reflects a major shift from the traditional emphasis on disaster response to disaster reduction, and in effect seeks to promote a 'culture of prevention'".[32] This statement is a reflection of the contents of the major General Assembly resolutions relating to the Strategy, emphasizing the need for international cooperation across the board with a focus on prevention.[33]

18. In 2002, the Plan of Implementation of the World Summit on Sustainable Development declared that "an integrated, multi-hazard, inclusive approach to address vulnerability, risk assessment and disaster management, including prevention, mitigation, preparedness, response and recovery, is an essential element of a safer world in the twenty-first century".[34]

19. A year later, in 2003, the Agenda for Humanitarian Action, adopted by the Twenty-eighth International Conference of the Red Cross and Red Crescent, focused on four main areas, one of which was reducing the risk and impact of disasters and the improvement of preparedness and response mechanisms. Final goal 3.1 of the Agenda is to "acknowledge the importance of disaster risk reduction and undertake measures to minimize the impact of disasters on vulnerable populations".[35]

20. Also in 2003, in its resolution 58/214, the General Assembly took note of the report of the Secretary-General, in which it was indicated that "the International Strategy for Disaster Reduction should continue to become a more visible, recognized and flexible instrument for reducing the risk of and vulnerability to natural hazards and related environmental and technological disasters".[36] To this end, the Secretary-General envisaged the development of a "framework for guidance and monitoring of disaster risk reduction".[37] The goal of this new framework would be "to increase the understanding and effectiveness of disaster risk reduction practices through a participatory process and building on existing praxis".[38] The Secretary-General concluded that "disaster risk reduction is a potent no-regrets solution for adapting nationally to climate change", and encouraged disaster risk assessment to support the new strategy.[39]

21. In February 2004, the General Assembly recognized "the urgent need to further develop and make use of the existing scientific and technical knowledge to

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[30] Ibid., para. 7.

[31] General Assembly resolution 54/219.

[32] UNISDR, "What is the International Strategy?". Available from www.unisdr.org/who-we-are/international-strategy-for-disaster-reduction.

[33] See General Assembly resolutions 54/219 and 56/195, respectively.

[34] A/CONF.199/20, annex, para. 37.

[35] Twenty-eighth International Conference of the Red Cross and Red Crescent, Agenda for Humanitarian Action (2003).

[36] A/58/277, para. 1.

[37] Ibid., paras. 17 and 20.

[38] Ibid., para. 20.

[39] Ibid., paras. 59 and 60.

reduce vulnerability to natural disasters".[40] It therefore decided to "convene a World Conference on Disaster Reduction in 2005 ... designed to foster specialized discussion and produce concrete changes and results".[41] By building on the Yokohama Strategy and its Plan of Action and the Johannesburg Plan of Implementation, the objectives of the Conference were to share the "best practices and lessons learned to further disaster reduction within the context of attaining sustainable development and identify gaps and challenges"; to "increase awareness of the importance of disaster reduction policies"; and to "increase the reliability and availability of appropriate disaster-related information to the public and disaster management agencies in all regions".[42] The Assembly stressed "the importance of identifying, assessing and managing risks prior to the occurrence of disasters".[43]

22. In 2005, the participants in the International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, held in Mauritius, adopted the Mauritius Declaration,[44] in which they emphasized the need for increased preventive protection of small island developing States[45] and pointed to disaster risk reduction and early warning systems[46] and the building of resilience[47] as appropriate measures.

23. The World Conference for Disaster Reduction took place in Kobe, Hyogo, Japan, from 18 to 22 January 2005. By its resolution 1, it adopted the Hyogo Declaration and, by its resolution 2, the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters.[48] The Hyogo Framework was intended as "the first plan to explain, describe and detail the work that is required from all different sectors and actors to reduce disaster losses", and the Conference provided "a unique opportunity to promote a strategic and systematic approach to reducing vulnerabilities and risks to hazards".[49] The Hyogo Declaration stated:

> We recognize as well that a culture of disaster prevention and resilience, and associated pre-disaster strategies, which are sound investments, must be fostered at all levels, ranging from the individual to the international levels. Human societies have to live with the risk of hazards posed by nature. However, we are far from powerless to prepare for and mitigate the impact of disasters. We can and must alleviate the suffering from hazards by reducing the vulnerability of societies. We can and must further build the resilience of nations and communities to disasters through people-centered early warning systems, risks assessments, education and other proactive, integrated, multi-hazard, and multi-sectoral approaches and activities in the context of the disaster reduction cycle, which consists of prevention, preparedness, and emergency response, as well as recovery and rehabilitation. Disaster risks, hazards, and their impacts pose a

[40] General Assembly resolution 58/214.
[41] Ibid., para. 7.
[42] Ibid., paras. 7 (c)-7 (e).
[43] General Assembly resolution 59/231.
[44] A/CONF.207/11, annex I.
[45] Ibid., paras. 3, 4, 6 and 10.
[46] Ibid., para. 6.
[47] Ibid., para. 13.
[48] A/CONF.206/6 and Corr.1, chap. I, resolution 2.
[49] See www.unisdr.org/we/coordinate/hfa and www.unisdr.org/we/inform/publications/1037.

threat, but appropriate response to these can and should lead to actions to reduce risks and vulnerabilities in the future.[50]

24. The Hyogo Framework for Action re-emphasized the responsibility of each State to take effective measures to reduce disaster risk, "including for the protection of people on its territory",[51] and took up the call made in the Johannesburg Plan of Implementation that "an integrated, multi-hazard approach to disaster risk reduction should be factored into policies, planning and programming related to sustainable development, relief, rehabilitation, and recovery activities in post-disaster and post-conflict situations in disaster-prone countries".[52]

25. The review of progress made in implementing the Yokohama Strategy identified specific gaps and challenges as key areas for developing a relevant framework for action for the decade 2005-2015: (a) governance: organizational, legal and policy frameworks; (b) risk identification, assessment, monitoring and early warning; (c) knowledge management and education; (d) reducing underlying risk factors; and (e) preparedness for effective response and recovery.[53] In the light of the objectives of the World Conference, the expected outcome for the subsequent 10 years was formulated as "the substantive reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries".[54]

26. In 2005, in its resolution 60/195, the General Assembly recognized that "the Hyogo Framework for Action complements the Yokohama Strategy … and its Plan of Action, and called "for a more effective integration of disaster risk reduction into sustainable development polices, planning and programming; for the development and strengthening of institutions, mechanisms and capacities to build resilience to hazards and for a systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes".[55]

27. The same year, in resolution 61/200, the General Assembly stressed:

> The importance of the Hyogo Declaration and the Hyogo Framework for Action and the priorities for action that States, regional and international organizations and international financial institutions as well as other concerned actors should take into consideration in their approach to disaster risk reduction and implement, as appropriate, according to their own circumstances and capacities bearing in mind the vital importance of promoting a culture of prevention in the area of natural disasters, including through the mobilization of adequate resources for disaster risk reduction, and of addressing disaster risk reduction, including disaster preparedness at the community level, and the adverse effects of natural disasters on efforts to implement national development plans and poverty reduction strategies with a view to achieving the internationally agreed development goals, including the Millennium Development Goals.[56]

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[50] A/CONF.206/6 and Corr.1, chap. I, resolution 1, para. 3.

[51] Hyogo Framework for Action, para. 13 (b), and Hyogo Declaration, para. 4.

[52] Hyogo Framework for Action, para. 13 (c).

[53] Ibid., para. 9.

[54] Ibid., para. 11.

[55] General Assembly resolution 60/195.

[56] General Assembly resolution 61/200, para. 4.

28. In 2007, the General Assembly adopted resolution 61/198, in which it "notes the proposed establishment of a Global Platform for Disaster Risk Reduction as the successor mechanism of the Inter-Agency Task Force for Disaster Reduction, and, taking into account the implementation of the Hyogo Framework for Action, decides that the Global Platform shall have the same mandate as the Inter-Agency Task Force for Disaster Reduction".[57] Three sessions of the Global Platform have been held since, in 2007, 2009 and 2011, with the fourth scheduled to be held in May 2013. Preparatory and follow-up work on the sessions of the Global Platform is led by the United Nations Office for Disaster Risk Reduction (UNISDR), which was created in 1999 as the secretariat of the International Strategy for Disaster Reduction.[58]

29. At the second session of the Global Platform, in 2009, Heads of State and Government highlighted "in stark, unequivocal terms that reducing disaster risk is critical to managing the impacts of climate change", while risk-prone countries stressed that they were giving "high priority to disaster risk reduction and wish to move ahead quickly in the design and adoption of policies and strategies to address their risks".[59]

30. In the report on the midterm review of the Hyogo Framework for Action, it was observed that "a growing political momentum for disaster risk reduction has been generated over the past five years", as exemplified by the thematic debate on disaster risk reduction convened in 2011 by the President of the General Assembly, at which Member States called for "more awareness-raising activities, better use of shared experiences, advanced planning and prevention".[60] In the report, a growing commitment at the national level to disaster risk reduction and the achievement of the Hyogo Framework for Action objectives was observed, and it was noted that preparedness was the priority for action where Governments had achieved the most "success".[61] It was stressed that, at the regional level, the Hyogo Framework for Action "has brought about a significant momentum for change".[62]

31. In May 2011, the third session of the Global Platform was held, grounded on the findings of the second session, in 2009, the results of the midterm review and the UNISDR *2011 Global Assessment Report on Disaster Risk Reduction*, which draws on various sources since 2005.[63] The Platform identified that it was critical to create incentives for investing in prevention, and noted that few countries incorporated disaster prevention into reconstruction and recovery planning.[64] In addition, "the discussions at the third session demonstrated that we now possess the

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[57] General Assembly resolution 61/198, para. 15.

[58] General Assembly resolution 54/219.

[59] Chair's summary of the second session of the Global Platform for Disaster Risk Reduction, paras. 1 and 6. Available from www.preventionweb.net/files/10750_GP09ChairsSummary.pdf.

[60] Inter-Agency Secretariat of the International Strategy for Disaster Reduction, "Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters: mid-term review 2010-2011" (2011), sect. 3.3. Available from www.unisdr.org/files/18197_midterm.pdf.

[61] Ibid., sect. 3.1, priority for action 5.

[62] Ibid., sect. 3.2.

[63] Available from www.unisdr.org/we/inform/publications/19846.

[64] Chair's summary of the third session of the Global Platform for Disaster Risk Reduction, paras. 8.5 and 9.1. Available from www.preventionweb.net/files/20102_gp2011chairssummary.pdf.

knowledge, the means and the commitment to make disaster risk reduction a national, local and international priority".[65]

32. In resolution 66/199, the General Assembly took note with appreciation of the results of the midterm review of the Hyogo Framework for Action and recognized that the Global Platform had been confirmed as "being the main forum at the global level for strategic advice coordination and partnership development for disaster risk reduction".[66] It also requested UNISDR to "facilitate the development of a post-2015 framework for disaster risk reduction".[67]

33. The Hyogo Framework for Action and the International Strategy for Disaster Reduction gave further impetus for binding and non-binding regional initiatives[68] focused on disaster risk reduction:[69] the Association of Southeast Asian Nations (ASEAN) Agreement on Disaster Management and Emergency Response (2005);[70] the Beijing Action for Disaster Risk Reduction in Asia (2005); the Delhi Declaration on Disaster Risk Reduction in Asia (2007); the Kuala Lumpur Declaration on Disaster Risk Reduction in Asia (2008); the 2010 Fourth Asian Ministerial Conference on Disaster Risk Reduction, leading to the Incheon Declaration on Disaster Risk Reduction in Asia and the Pacific 2010, the Incheon Regional Roadmap and Action Plan on Disaster Risk Reduction through Climate Change Adaptation in Asia and the Pacific, reaffirming the Framework for Action and proposing Asian initiatives for climate change adaptation and disaster risk reduction considering vulnerabilities in the region;[71] the African Union Africa Regional Strategy for Disaster Risk Reduction of 2004, which was followed by a programme of action for its implementation (originally for the period 2005-2010, but later extended to 2015);[72] four sessions of the African Regional Platform for Disaster Risk Reduction, the most recent in 2013;[73] the Arab Strategy for Disaster Risk Reduction 2020, adopted by the Council of Arab Ministers Responsible for the Environment at its twenty-second session, in December 2010;[74] and, lastly, the Nayarit Communiqué on Lines of Action to Strengthen Disaster Risk Reduction in the Americas (2011).[75]

34. Developments in the field of climate change have reinforced disaster risk reduction, most prominently in the Cancun Adaptation Framework, to enhance action on adaptation, seeking to reduce vulnerabilities and build resilience in

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[65] Ibid., para. 4.

[66] General Assembly resolution 66/199, paras. 4 and 5.

[67] Ibid., para. 5.

[68] The establishment of national platforms for disaster reduction, already called for in 1991, was requested by the Economic and Social Council in paragraph 8 of its resolution 1999/63, as well as in paragraph 3 of General Assembly resolutions 56/195, 58/214 and 58/215.

[69] For an overview, see also General Assembly resolution 59/228.

[70] ASEAN Documents Series 2005, p. 157. The Agreement is the first international treaty concerning disaster risk reduction to have been developed after the adoption of the Hyogo Framework for Action.

[71] For the text of the Declaration, see www.preventionweb.net/files/16327_finalincheondeclaration1028.pdf.

[72] Extended Programme of Action for the Implementation of the Africa Regional Strategy for Disaster Risk Reduction (2006-2015), introduction.

[73] UNISDR, "Africa seeks united position on disaster risk reduction", 13 February 2013. Available from www.unisdr.org/archive/31224.

[74] For the text of the Strategy, see www.unisdr.org/files/18903_17934asdrrfinalenglishjanuary20111.pdf.

[75] For the text of the Communiqué, see www.unisdr.org/files/18603_communiquenayarit.pdf.

developing countries, explicitly taking into consideration the Hyogo Framework for Action.[76] In addition, in the outcome document of the United Nations Conference on Sustainable Development, entitled "The future we want", adopted in 2012, Heads of State and Government and high-level representatives reaffirmed their commitment to the Hyogo Framework for Action.[77] They called "for disaster risk reduction and the building of resilience to disasters to be addressed with a renewed sense of urgency ... and to be integrated into policies, plans, programmes and budgets at all levels and considered within relevant future frameworks".[78]

35. States have implemented the Hyogo Framework for Action by incorporating disaster risk reduction into national policy and legal frameworks. In a 2011 review of international implementation of national policy and legal frameworks for disaster risk reduction, based on a self-reporting mechanism that is non-exclusive, numerous States reported having integrated disaster risk reduction into development plans.[79]

B. Prevention as a principle of international law

36. At this point, the Special Rapporteur deems it appropriate to recall the centrality of his dual-axis approach throughout the study of the present topic. Just as the disaster-proper phase, the pre-disaster phase implies rights and obligations both horizontally (the rights and obligations of States in relation to one another and the international community) and vertically (the rights and obligations of States in relation to persons within a State's territory and control). The obligation of States in relation to one another and the international community in the pre-disaster phase have been alluded to by the Special Rapporteur in his fifth report with reference to the duty to cooperate in disaster preparedness, prevention and mitigation.[80] Also relevant in the pre-disaster phase as regards rights and obligations of States in relation to one another is the obligation to prevent transboundary harm.[81] Nevertheless, as noted in the memorandum by the Secretariat, "prevention is more closely associated with a primary obligation to prevent harm to one's own population, property and the environment generally".[82]

37. As can be seen from the historical account given in the preceding section, prevention, mitigation and preparedness have long been part of the discussion relating to natural disaster reduction and more recently to that on disaster risk reduction. Generally, they cover measures that can be taken in the pre-disaster phase.[83] As has been aptly put in the memorandum by the Secretariat, "prevention,

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[76] FCCC/CP/2010/7/Add.1, para. 14 (e).

[77] General Assembly resolution 66/288, annex, para. 186.

[78] Ibid.

[79] See the compilation of national progress reports on the implementation of the Hyogo Framework for Action (2009-2011), Hyogo Framework for Action priority 1, core indicator 1.1. Available from www.preventionweb.net/english/hyogo/progress/documents/hfa-report-priority1-1%282009-2011%29.pdf.

[80] A/CN.4/652, paras. 114-115.

[81] *Yearbook of the International Law Commission, 2001*, vol. II, Part II (United Nations publication, Sales No. E.04.V.17 (Part 2)), para. 98.

[82] A/CN.4/590, para. 24.

[83] General Assembly resolution 42/169, para. 4 (a).

mitigation and preparedness lie on different points of the continuum of actions undertaken in advance of the onset of a disaster".[84]

38. Preparedness, which is an integral part of disaster or emergency management, has been characterized as "the organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps".[85] It was proposed as an appropriate measure to confront earthquakes as early as 1983.[86] After inclusion as a specific focus of the International Decade for Natural Disaster Reduction, the United Nations Development Programme organized a disaster management training programme on disaster preparedness and elaborated further upon the notion in 1994.[87] Preparedness came to be understood as crucial to international relief assistance. Accordingly, the objective of preparedness measures is closely related to the occurrence of a disaster.[88] As the Secretariat concluded, "preparedness refers to those measures put into place in advance to ensure an effective response, including the issuance of timely and effective early warning and the temporary evacuation of people and property".[89] In temporal terms, preparedness straddles two areas of disaster risk reduction and disaster management: the pre-disaster phase and the post-disaster phase. The simple goal of disaster preparedness is to respond effectively and recover more swiftly when disasters strike. Preparedness efforts also aim at ensuring that those having to respond know how to use the necessary resources. The activities that are commonly associated with disaster preparedness include developing planning processes to ensure readiness; formulating disaster plans; stockpiling resources necessary for effective response; and developing skills and competencies to ensure effective performance of disaster-related tasks.[90] The Federal Emergency Management Agency of the United States of America has defined disaster preparedness as "a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure effective coordination during incident response".[91]

39. "Mitigation" is frequently referred to in most instruments relating to disaster risk reduction together with preparedness.[92] In its resolution 44/236, the Assembly set as a goal of the International Decade for Natural Disaster Reduction, "to improve the capacity of each country to mitigate the effects of natural disasters expeditiously and effectively".[93] In terms of specific measures, mitigation came to be understood

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[84] A/CN.4/590, para. 27.

[85] ISDR, UNISDR *Terminology on Disaster Risk Reduction*, available from www.unisdr.org/eng/library/UNISDR-terminology-2009-eng.pdf.

[86] J. Drakopoulos and S. Tassos, "Earthquakes and their social, economic and legal implications", in *Proceedings of the Seminar on Earthquake Preparedness, Athens, 11-14 January 1983* (Geneva, Office of the United Nations Disaster Relief Coordinator, 1984), p. 183.

[87] See www.icimod.org/?opg=949&q=drr_document&document=671.

[88] General Assembly resolution 46/182, para. 18.

[89] A/CN.4/590, para. 27.

[90] Jeannette Sutton and Kathleen Tierney, "Disaster preparedness: concepts, guidance and research", report prepared for the Fritz Institute "Assessing Disaster Preparedness" Conference, Sebastopol, California, 3 and 4 November 2006.

[91] See www.fema.gov/plan/index.shtm.

[92] General Assembly resolution 46/182, annex, sect. III.

[93] General Assembly resolution 44/236, annex, para. 2 (a).

as aiming at structural or non-structural measures to limit the adverse effects of disaster.[94]

40. Since, by definition, mitigation and preparedness imply the taking of measures prior to the onset of a disaster, they can be properly regarded as specific manifestations of the overarching principle of prevention, which lies at the heart of international law. The Charter of the United Nations has so enshrined it in declaring that the first purpose of the United Nations is "to maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace".[95] The International Law Commission, in its 2001 draft articles on prevention of transboundary harm from hazardous activities, considered the "well-established principle of prevention" in relation to that international aspect of man-made disasters.[96] The Commission explicitly referred to the Declaration of the United Nations Conference on the Human Environment, the Rio Declaration on Environment and Development and General Assembly resolution 2995 (XXVII) and concluded that the "prevention of transboundary harm to the environment, persons and property has been accepted as an important principle in many multilateral treaties concerning protection of the environment, nuclear accidents, space objects, international watercourses, management of hazardous wastes and prevention of marine pollution".[97]

41. The existence of an international legal obligation to prevent harm, both in its horizontal and vertical dimensions,[98] finds support in human rights law and environmental law.

1. Human rights law

42. In his preliminary report, the Special Rapporteur emphasized that "States are under a permanent and universal obligation to provide protection to those on their territory under the various international human rights instruments and customary international human rights law".[99] He further recalled "that each human right is deemed to entail three levels of obligation on the State":[100] the duty to respect (i.e. refraining itself from violating), protect (i.e. protecting rights holders from violations by third parties) and fulfil (i.e. taking affirmative actions to strengthen access to the right).[101] Protection, however, does not only relate to actual violations of human rights but also entails an obligation for States to prevent their occurrence.[102]

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[94] See *Living with Risk: A Global Review of Disaster Reduction Initiatives, 2004 version*, vol. I (United Nations publication, Sales No. GV.E.03.0.2), p. 17.

[95] Charter of the United Nations, Article 1 (1).

[96] *Yearbook of the International Law Commission, 2001*, vol. II, Part II (United Nations publication, Sales No. E.04.V.17 (Part 2)), para. 98, general commentary, para. (4).

[97] Ibid., para. (5).

[98] See para. 36 above.

[99] A/CN.4/598, para. 25.

[100] Ibid., para. 26.

[101] See David Fisher, *Law and Legal Issues in International Disaster Response: A Desk Study* (International Federation of Red Cross and Red Crescent Societies, Geneva, 2007), p. 34.

[102] Theo van Boven, "Prevention of human rights violations", in *The Future of Human Rights Protection in a Changing World: Fifty Years since the Four Freedoms Address. Essays in Honour of Torkel Opsahl*, Asbjørn Eide and Jan Helgesen, eds. (Oslo, Norwegian University Press, 1991), p. 191.

43. This positive obligation to prevent human rights violations is explicitly enshrined in article 1 of the Convention on the Prevention and Punishment of the Crime of Genocide[103] and article 2 of the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment.[104]

44. Furthermore, the International Covenant on Civil and Political Rights[105] establishes a positive obligation for States to respect and ensure human rights for all individuals subject to its jurisdiction, without distinction of any kind.[106] Articles 2 (2) and 3 (a) and 3 (b) point to an obligation to prepare for and mitigate the consequences of human rights violations. Article 2 (2) has been described as entailing "preventive measures to ensure the necessary conditions for unimpeded enjoyment of the rights enshrined in the Covenant".[107] The prevention of human rights violations has been described as "basically the identification and the eradication of the underlying causes leading to violations of human rights".[108] With reference to torture, it has been observed that the violation of the right not to be tortured is the "final link in a long chain which starts where respect for the human dignity is taken lightly; its prevention means having to identify the links of the chain which precede torture and to break the chain before it reaches its final link".[109]

45. More explicitly, the Inter-American Court of Human Rights has formulated the legal obligation of States to take reasonable steps to prevent human rights violations in the following manner:

> This duty to prevent includes all those means of a legal, political, administrative and cultural nature that promote the protection of human rights and ensure that any violations are considered and treated as illegal acts, which, as such may lead to the punishment of those responsible and the obligation to indemnify the victims for damages. It is not possible to make a detailed list of all such measures, since they vary with the law and the conditions of each State Party.[110]

46. Also in his preliminary report, the Special Rapporteur gave as examples of the human rights relevant in the event of disasters the rights to life, food, health and medical services, the supply of water, adequate housing, clothing and sanitation and not to be discriminated against.[111] The protection of those rights in the event of disasters extends to the taking of measures aimed at preventing and mitigating their effects. Each of those rights must also be read in the light of a State's duty "to

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[103] Convention on the Prevention and Punishment of the Crime of Genocide, General Assembly resolution 260 A (III), annex.

[104] Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, United Nations, *Treaty Series*, vol. 1465, No. 24841.

[105] See General Assembly resolution 2200 A (XXI), annex.

[106] Manfred Nowak, *UN Covenant on Civil and Political Rights, CCPR Commentary*, 2nd revised ed. (Kehl am Rhein, N. P. Engel, 2005), art. 2, para. 18.

[107] Ursula Kriebaum, "Prevention of human rights violations", *Austrian Review of International and European Law*, vol. 2, No. 1 (1997), p. 156.

[108] Manfred Nowak and Walter Suntinger, "International mechanisms for the prevention of torture", in *Monitoring Human Rights in Europe*, Arie Bloed, Liselotte Leicht, Manfred Nowak and Allan Rosas, eds. (Dordrecht, Martinus Nijhoff, 1993), p. 146.

[109] Ibid.

[110] *Velasquez Rodriguez v. Honduras*, Judgement of 29 July 1988, Inter-American Court of Human Rights, Series C, No. 4, paras. 174-175.

[111] A/CN.4/598, para. 26.

respect and to ensure".[112] The obligation to respect requires States not to take any measures that would result in individuals being prevented from exercising or experiencing their rights. The obligation to ensure requires States to take positive measures to ensure that State authorities and third parties cannot violate a person's rights. Thus, an international obligation to prevent and mitigate disasters arises from States' universal obligation to ensure rights such as the rights to life and food, clothing and shelter. Such an international duty to prevent and mitigate disasters based in human rights law was identified as early as 1978.[113]

47. Article 6 of the International Covenant on Civil and Political Rights prohibits the arbitrary deprivation of life, which includes obligations on States to affirmatively protect the right to life. The Human Rights Committee has already indicated that article 6 requires States to prevent certain life-threatening and foreseeable disasters. In its general comment interpreting article 6, the Committee stated that it would be desirable for States to take positive measures to reduce mortality, including measures to "eliminate malnutrition and epidemics".[114] Here, the Committee clearly had such disasters in mind, including, for example, extreme cases of malnutrition (e.g. famine) as would fall within the definition of disaster adopted by the International Law Commission in draft article 3.[115] The rights secured by the Covenant also go hand in hand with those enshrined in the Universal Declaration of Human Rights. According to article 3 of the Declaration, "everyone has the right to life, liberty and security of person". As provided in article 25 (1), "everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control".[116] Disasters are certainly situations under which an individual may face "circumstances beyond his control".[117]

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[112] See, for example, article 2 (1) of the International Covenant on Civil and Political Rights.

[113] See J. W. Samuels, "The relevance of international law in the prevention and mitigation of natural disasters", in *Disaster Assistance: Appraisal, Reform and New Approaches*, Lynn H. Stephens and Stephen J. Green, eds. (New York, New York University Press, 1979), pp. 245 and 248 ("As a minimum, the recognized right to an adequate standard of living, including adequate food, clothing, and housing, must involve a State's legal obligation to assist another in time of natural disaster, a State's legal obligation to prepare for disaster relief within its own territory and to take preventive measures in order to minimize the suffering resulting from natural disasters"). See also Jacqueline Hand, "Disaster prevention presentation, from SCJIL symposium 2003", *Santa Clara Journal of International Law*, vol. 1, No. 1 (2003), pp. 147 and 159-161.

[114] HRI/GEN/1/Rev.1, para. 5 ("Moreover, the Committee has noted that the right to life has been too often narrowly interpreted. The expression 'inherent right to life' cannot properly be understood in a restrictive manner, and the protection of this right requires that States adopt positive measures. In this connection, the Committee considers that it would be desirable for States parties to take all possible measures to reduce infant mortality and to increase life expectancy, especially in adopting measures to eliminate malnutrition and epidemics.").

[115] For a discussion of famine and malnutrition as a disaster, see Márcio Pereira Pinto Garcia, "Famine as a catastrophe: the role of international law", in *Les aspects internationaux des catastrophes naturelles et industrielles/The International Aspects of Natural and Industrial Catastrophes*, David D. Caron and Charles Leben, eds. (Dordrecht, Kluwer, 2001), p. 229.

[116] General Assembly resolution 217 A (III).

[117] George Kent, "The human right to disaster mitigation and relief", *Environmental Hazards*, vol. 3 (2001), p. 137.

48. In addition, article 11 of the International Covenant on Economic, Social and Cultural Rights recognizes the "right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions". In the event of a disaster, a State has the obligation to guarantee the standard of living of everyone by mitigating its effects.[118] Such a legal obligation in respect of disaster relief was already affirmed in 1977, also in consideration of "the economic, social, and political interest of all nations in the speedy mitigation of the human effects of a disaster anywhere".[119] Of course, the Covenant regime is subject to progressive realization,[120] meaning that a State's obligation to fulfil article 11 depends in part on its level of economic development.[121]

49. The Convention on the Rights of the Child also recognizes "the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development".[122] The States parties to the Convention have the duty to "take appropriate measures" to assist parents in fulfilling their primary responsibility to implement that right, "particularly with regard to nutrition".[123]

50. The existence of an obligation to mitigate has been recently addressed in relation to climate change, in particular when establishing a core set of minimum thresholds or basic human rights standards, which have to be taken into account when dealing with climate change.[124] In addition, as regards preparedness, it has been suggested that public health law "recommends laws that encourage or require natural disaster preparedness".[125]

51. International jurisprudence has recently adopted the approach outlined in the present section, with the European Court of Human Rights expressly recognizing that the right to life requires States to take all appropriate measures to prevent both natural and man-made disasters.[126] In two groundbreaking cases, the Court held that

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[118] In support of the view that this human right presupposes an obligation to mitigate, see Barbara Nicoletti, "The prevention of natural and man-made disasters: what duties for States", in *International Disaster Response Law*, Andrea de Guttry, Marco Gestri and Gabriella Venturini, eds. (The Hague, T.M.C. Asser Press, 2012), p. 194. See also Jacqueline Hand, "Disaster prevention presentation", pp. 147 and 159.

[119] Stephen Green, *International Disaster Relief: Towards a Responsive System* (New York, McGraw-Hill Book Company, 1977), p. 66.

[120] See International Covenant on Economic, Social and Cultural Rights, art. 2.

[121] Progressive realization itself is not foreign to the concept of prevention in international law. In the commentary to the International Law Commission draft articles on prevention of transboundary harm, it was noted that "the economic level of States is one of the factors to be taken into account in determining whether a State has complied with its obligation of due diligence" and that "a State's economic level cannot be used to dispense the State from its obligation under the present articles". See the draft articles on prevention of transboundary harm, art. 3, commentary para. (13).

[122] Convention on the Rights of the Child, art. 27 (1).

[123] Ibid., art. 27 (3).

[124] Siobhan McInerney-Lankford, Mac Darrow and Lavanya Rajamani, *Human Rights and Climate Change: A Review of the International Legal Dimensions* (Washington, D.C., World Bank, 2011), p. 30.

[125] David L. Feinberg, "Hurricane Katrina and the public health-based argument for greater federal involvement in disaster preparedness and response", *Virginia Journal of Social Policy and the Law*, vol. 13, No. 3 (2005-2006), p. 598.

[126] See Walter Kälin and Claudine Haenni Dale, "Disaster risk mitigation — why human rights matter", *Forced Migration Review*, No. 31 (2008), p. 38.

failing to take feasible measures that would have prevented or mitigated the consequences of foreseeable disasters amounted to a violation of the right to life and therefore incurred the responsibility of the State under international law.[127] In *Öneryildiz*, a methane explosion in a public refuse dump, situated on a slope overlooking a valley in Istanbul, engulfed 10 slum dwellings in the immediate vicinity of the dump and killed 39 people. Experts had warned the Turkish authorities of the risk of such an explosion two years earlier, but no steps were taken. In *Budayeva*, a mudslide swept through a mountainous town in the Russian Federation, killing several people and destroying many buildings. While the town had been protected by retention dams, they were badly damaged by particularly heavy mudslides in 1999 and never repaired, warnings by the State meteorological institute notwithstanding. Two weeks before the mudslide, the agency informed the local Ministry for Disaster Relief about the imminent danger of a new disaster and requested that observation points should be set up in the upper sections of the river and that an emergency warning should be issued if necessary. None of the proposed measures were taken.

52. Interpreting article 2 of the European Convention on Human Rights, which ensures the right to life in almost identical terms as article 6 of the International Covenant on Civil and Political Rights, the Court affirmed in its judgement in *Öneryildiz* that the right to life "does not solely concern deaths resulting from the use of force by an agent of the State but also ... lays down a positive obligation on States to take appropriate steps to safeguard the lives of those within their jurisdiction" and stressed that "this positive obligation entails above all a primary duty on the State to put in place a legislative and administrative framework designed to provide effective deterrence against threats to the right to life".[128] In its 2008 judgement in *Budayeva*, the Court concluded:

> In the sphere of emergency relief, where the State is directly involved in the protection of human lives through the mitigation of natural hazards, these considerations should apply in so far as the circumstances of a particular case point to the imminence of a natural hazard that had been clearly identifiable, and especially where it concerned a recurring calamity affecting a distinct area developed for human habitation or use ... The scope of the positive obligations imputable to the State in the particular circumstances would depend on the origin of the threat and the extent to which one or the other risk is susceptible to mitigation.[129]

53. A State therefore incurs liability when it neglects its duty to take preventive measures when a natural hazard is clearly identifiable and effective means to mitigate the risk are available to it.[130] These two decisions concerning a duty to prevent and mitigate disasters are relevant for a number of reasons. First, the Court articulated the same duty regarding natural and man-made disasters. Second, the Court

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[127] See European Court of Human Rights, *Öneryildiz v. Turkey*, application No. 48939/99, judgement of 30 November 2004; European Court of Human Rights, *Budayeva and Others v. Russia*, application Nos. 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, judgement of 20 March 2008.

[128] European Court of Human Rights, *Öneryildiz v. Turkey*, application No. 48939/99, judgement of 30 November 2004, paras. 128-129.

[129] *Budayeva and Others v. Russia*, application Nos. 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, judgement of 20 March 2008, para. 137.

[130] Walter Kälin and Claudine Haenni Dale, "Disaster risk mitigation — why human rights matter", p. 39.

faulted Turkey and the Russian Federation for failing to "take appropriate steps" to prevent the harm, which mirrors the obligation in various international instruments for States to take "appropriate" or "necessary" measures to reduce the risk of disaster. Third, the cases suggest that a State's duty is triggered when a disaster becomes foreseeable, which mirrors the foreseeability requirement within the principle of due diligence.[131]

2. Environmental law

54. States have an obligation not to cause environmental harm *in genere* and to ensure that activities within their jurisdiction do not harm the environment or areas under the jurisdiction of another State. The duty to prevent in international environmental law encompasses both obligations.[132] Prevention in the environmental context is based on the common law principle of *sic utere tuo ut alienum non laedas*. As declared by the International Court of Justice in the *Corfu Channel* case, this principle is well established in international law[133] and was applied as early as 1941 in the *Trail Smelter* arbitration.[134] The first clear pronouncement of the principle of prevention in international environmental law can be found in principle 21 of the Declaration of the United Nations Conference on the Human Environment,[135] which reads:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

55. Principle 2 of the Rio Declaration on Environment and Development adopted principle 21 wholesale, with the added recognition that States have a sovereign right to exploit their own resources according to their developmental policies.[136] Principle 11 of the Rio Declaration builds on this obligation by adding that States must adopt legislative and administrative policies intended to prevent or mitigate transboundary harm.[137]

56. The principle was affirmed in the 1996 advisory opinion of the International Court of Justice on the *Legality of the Threat or Use of Nuclear Weapons*[138] in the following terms:

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[131] See para. 61 below.

[132] *Case concerning Pulp Mills on the River Uruguay* (*Argentina v. Uruguay*), judgment of 20 April 2010, *I.C.J. Reports 2010*, Separate Opinion by Judge Cançado Trindade, para. 59.

[133] *Corfu Channel* case (*United Kingdom of Great Britain and Northern Ireland v. Albania*), judgment of 9 April 1949, *I.C.J. Reports 1949*, p. 22.

[134] *Trail Smelter* case *(United States of America v. Canada)*, *Reports of International Arbitral Awards*, vol. III, pp. 1905-1982.

[135] *Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June* (A/CONF.48/14/Rev.1), part one, chap. I, principle 21.

[136] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex I, principle 2.

[137] Ibid., principle 11.

[138] *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996*, p. 241, para. 29.

The existence of the general obligation of States to ensure that activities within their activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now a part of the corpus of international law relating to the environment.

57. Over time, the key enunciations of the principle of prevention have been used to hold States responsible for failing to take steps necessary to stop transboundary harm. For example, in the *Gabčíkovo-Nagymaros Project* case, the International Court of Justice called upon both parties to "look afresh at the effects on the environment of the operation of the Gabčíkovo power plant" on the Danube River.[139] In the light of "new norms and standards", the Court found that, at least in the field of environmental protection, "vigilance and prevention are required" on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation to this type of damage.[140] Similarly, in the *Pulp Mills on the River Uruguay* case, the Court found that the principle of prevention was part of customary international law and that a State was thus obliged to use all the means at its disposal in order to avoid activities that took place in its territory or in any area under its jurisdiction causing significant damage to the environment of another State.[141]

58. In 1982, the World Charter for Nature was adopted by the General Assembly, embodying prevention as its underpinning principle.[142] The Assembly recalled its conviction that "the benefits which could be obtained from nature depended on the maintenance of natural processes and on the diversity of life forms and that those benefits were jeopardized by the excessive exploitation and the destruction of natural habitats".[143]

59. As already mentioned, in 2001, the International Law Commission identified a "well-established principle of prevention" in the context of transboundry environmental harm.[144] Article 3 of the draft articles on prevention of transboundary harm from hazardous activities requires States to "take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof".[145] In establishing such a duty, the Commission drew upon the principle of *sic utere tuo ut alienum non laedas*, while adding more specificity to the "limitations on the freedom of States reflected in principle 21" of the Declaration of the United Nations Conference on the Human Environment. Article 3 imposes an obligation on States to "adopt and implement national legislation incorporating accepted international standards"[146] and to enforce legislation and administrative regulations

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[139] *Case concerning the Gabčíkovo-Nagymaros Project* (*Hungary/Slovakia*), *I.C.J. Reports 1997*, p. 7, para. 140.

[140] Ibid.

[141] *Pulp Mills on the River Uruguay*, para. 101 (citing para. 22 of the judgment in the *Corfu Channel* case and the advisory opinion of the International Court of Justice on the *Legality of the Threat or Use of Nuclear Weapons*).

[142] General Assembly resolution 37/7.

[143] Ibid.

[144] Draft articles on prevention of transboundary harm, art. 3, commentary para. (4).

[145] Ibid. Prevention is also the preferred method of asserting State responsibility and liability for transboundary harm. In his first report on prevention of transboundary damage from hazardous activities, the Special Rapporteur, Pemmaraju Sreenivasa Rao, states that "prevention as a policy in any way is better than cure" and that "it is a time-honoured policy and one that is widely used by many developed and industrialized societies to manage and even reduce or eliminate the ill effects of their economic growth" (A/CN.4/487, para. 32).

[146] Draft articles on prevention of transboundary harm, art. 3, commentary para. (4).

to ensure compliance.[147] The principle of prevention also animates article 7 on the assessment of risk, article 8 on the duty to notify, article 9 on the duty to consult with affected States on preventive measures and article 16 on emergency preparedness. The commentary to article 16 even recognizes a "duty to prevent environmental disasters".[148]

60. Both the International Court of Justice and the International Law Commission agree that the principle of prevention stems from two distinct but interrelated State obligations: due diligence and the precautionary principle.[149]

(a) Due diligence

61. The principle of due diligence is an established principle of international law and has been referred to as one of its "basic principles".[150] It has been associated with the principle of responsibility, referring to underlying rules within a "regime of responsibility for breach of due diligence obligations".[151] In relation to acts or omissions of non-State actors, it has been stated as early as the beginning of the twentieth century that "the State may incur responsibility if it fails to exercise due diligence in preventing or reacting to such acts or omissions".[152] Due diligence, as it relates to prevention in the environmental context, has been defined as using, among others, the "best practicable means"[153] or "all appropriate and effective measures".[154] As described by the International Court of Justice in the *Pulp Mills on the River Uruguay* case, the obligation to "prevent pollution" in the treaty between Uruguay and Argentina was "an obligation to act with due diligence in respect of all activities which take place under the jurisdiction and control of each party".[155]

62. The obligation of due diligence is the standard basis for prevention.[156] The obligation is one of conduct rather than result; the duty of due diligence cannot guarantee the total prevention of significant harm, but a State must exert best

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[147] Ibid., para. (6).

[148] Ibid., art. 16, commentary para. (1).

[149] Ibid., art. 3, commentary paras. (7)-(18).

[150] Luigi Condorelli, "The imputability to States of acts of international terrorism", *Israel Yearbook on Human Rights*, vol. 19 (1989), pp. 240-242. See also Riccardo Pisillo-Mazzeschi, "The due diligence rule and the nature of the international responsibility of States", *German Yearbook of International Law*, vol. 35 (1992), pp. 9-51.

[151] Riccardo Pisillo-Mazzeschi, "Forms of international responsibility for environmental harm", in *International Responsibility for Environmental Harm*, Francesco Francioni and Tullio Scovazzi, eds. (London, Graham & Trotman, 1991), pp. 15-16.

[152] Amos Shartle Hersey, *The Essentials of International Public Law* (New York, Macmillan Company, 1918), p. 162. See also Robert Perry Barnidge Jr., "The due diligence principle under international law", *International Community Law Review*, vol. 8, No. 1 (2006), pp. 81-121.

[153] United Nations Convention on the Law of the Sea, United Nations, *Treaty Series*, vol. 1833, No. 31363, art. 194.

[154] Convention on Environmental Impact Assessment in Transboundary Context, United Nations, *Treaty Series*, vol. 1989, No. 34028, art. 2 (1).

[155] *Pulp Mills on the River Uruguay*, para. 197.

[156] Draft articles on prevention of transboundary harm, art. 3, commentary para. (8).

possible efforts to minimize the risk.[157] In this sense, the duty of due diligence is the core obligation of the prevention principle,[158] and the formula obliging States to take all "necessary or appropriate measures" (e.g. article 3 of the draft articles on transboundary harm) is often used to express this due diligence obligation.[159] Due diligence is manifested by a State's efforts to implement and enforce legislation and administrative regulations on prevention.[160] Due diligence has been accepted by States as "in accordance with current realities of State practice and international law".[161] To arrive at this finding, the International Law Commission relied on a number of international environmental conventions that contain obligations to take appropriate measures or, more specifically, to implement treaty obligations through legislation and administrative regulations.[162] Thus, although the term "due diligence" is not used by international environmental conventions, it is accepted that numerous treaties on the law of the sea, maritime pollution, protection of the ozone layer, environmental impact assessments and the use of transboundary watercourses and international lakes contain such an obligation.[163]

63. The obligation of due diligence has two main characteristics: the degree of care in question is that expected of a "good Government" and the required degree of care is also proportional to the degree of hazardousness of the activity involved.[164] Regarding the "good Government" standard, for the Commission:

> The main elements of the obligation of due diligence involved in the duty of prevention could be thus stated: the degree of care in question is that expected of a good Government. It should possess a legal system and sufficient resources to maintain an adequate administrative apparatus to control and monitor the activities. It is, however, understood that the degree of care expected of a State

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[157] Ibid., para. (7).

[158] In his second report on international liability for injurious consequences arising out of acts not prohibited by international law (prevention of transboundary damage from hazardous activities), the Special Rapporteur, Pemmaraju Sreenivasa Rao, notes that "the duty of prevention, which is an obligation of conduct, is essentially regarded as a duty of due diligence" and that "any question concerning implementation or enforcement of the duty of prevention would necessarily have to deal with the content of the obligation and hence the degree of diligence which should be observed by States" (A/CN.4/501, para. 18).

[159] Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, United Nations, *Treaty Series*, vol. 1046, No. 15479, art. 1; United Nations Convention on the Law of the Sea, art. 194; and Convention on the Transboundary Effects of Industrial Accidents, United Nations, *Treaty Series*, vol. 2105, No. 36605, art. 3. See also Cesare P. R. Romano, "L'obligation de prévention des catastrophes industrielles et naturelles" in *Les aspects internationaux des catastrophes naturelles et industrielles/The International Aspects of Natural and Industrial Catastrophes*, David D. Caron and Charles Leben, eds. (Dordrecht, Kluwer, 2001), p. 389. See in particular Barbara Nicoletti, "The prevention of natural and man-made disasters: what duties for States".

[160] Draft articles on prevention of transboundary harm, art. 3, commentary para. (10).

[161] A/CN.4/510, para. 10.

[162] See the draft articles on transboundary harm, art. 3, commentary para. (8), footnote 880 (citing the United Nations Convention on the Law of the Sea, art. 194 (1); the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, arts. I, II and VII (2); the Vienna Convention for the Protection of the Ozone Layer, art. 2; the Convention on the Regulation of Antarctic Mineral Resource Activities, art. 7 (5); the Convention on Environmental Impact Assessment in a Transboundary Context, art. 2 (1); and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, art. 2 (1)).

[163] See ibid.

[164] A/CN.4/510, para. 20.

with a well-developed economy and human and material resources and with highly evolved systems and structures of governance is different from States which are not so well placed.[165]

64. According to the Commission, under the "good Government" criterion, the economic level of States is one of the factors to be taken into account in determining whether a State has complied with its obligations of due diligence.[166] It is understood, however, that a State's economic level cannot discharge it from its obligation in this regard and, in fact, "vigilance, employment of infrastructure and monitoring of hazardous activities in the territory of a State, which is a natural attribute of any State, are expected".[167] As far as the proportionality standard is concerned, the degree of care required of a State is proportional to the degree of harm that the hazard involves. The harm itself should be foreseeable and the State must have known or should have known that the degree of risk was significant.[168]

65. The European Court of Human Rights has also framed the duty of prevention as one of due diligence. In *Öneryildiz*, the Court held that Turkish authorities had a positive obligation to prevent when they "knew or ought to have known that there was a real and immediate risk to a number of persons"[169] and that a failure "to take measures that were necessary and sufficient to avert the risks inherent in dangerous activity"[170] amounted to a violation of the right to life under article 2 of the European Convention on Human Rights. Similarly, in *Budayeva*, the Court found that, in the face of increasing risks of mudslides, "the authorities could reasonably be expected to acknowledge the increased risk of accidents in the event of a mudslide that year and to show all possible diligence in informing the civilians and making advance arrangements for the emergency evacuation".[171] Nevertheless, in *Öneryildiz*, the Court recognized that "an impossible or disproportional burden must not be imposed on the authorities without consideration being given, in particular, to the operational choices which they must make in terms of priorities and resources".[172] In *Budayeva*, the Court noted that "this consideration must be afforded even greater weight in the sphere of emergency relief in relation to a meteorological event, which is as such beyond human control, than in the sphere of dangerous activities of a man-made nature".[173] Allowing for various actions to be taken on the basis of the specific capacities and priorities of the State does not, however, absolve States of their obligation to avert risk and to "do everything within their power to protect [people] from the immediate and known risks to which they were exposed".[174]

(b) Precautionary principle

66. Under international environmental law, the "precautionary principle" relates to the more general prevention of environmental harm (including within national

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[165] Draft articles on prevention of transboundary harm, art. 3, commentary para. (17).
[166] Ibid. See also A/CN.4/510, para. 23.
[167] Draft articles on prevention of transboundary harm, art. 3, commentary para. (17).
[168] Ibid., para. (18).
[169] *Öneryildiz v. Turkey*, para. 101.
[170] Ibid., para. 93.
[171] *Budayeva and Others v. Russia*, para. 152.
[172] *Öneryildiz v. Turkey*, para. 107.
[173] *Budayeva and Others v. Russia*, para. 135.
[174] Ibid., para. 109.

boundaries) and essentially creates a rebuttable presumption that an action or policy has a suspected risk of causing harm to the public or to the environment absent evidence that it does not pose a risk.[175] The Rio Declaration first formulated it as follows: "In order to protect the environment, the precautionary approach shall be widely applied by States, according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[176] The precautionary principle entails two main elements: the awareness of the existence or persistence of risks and the awareness of scientific uncertainties surrounding the issue at stake.[177]

67. The commentary to article 3 of the draft articles on prevention of transboundary harm recognizes that the duty to prevent involves taking such measures as are appropriate by way of abundant caution, even if full scientific certainty does not exist, to avoid or prevent serious or irreversible damage.[178] The commentary to draft articles 7 and 10 expressly finds that the precautionary principle has become a general principle of environmental law.[179]

68. The principle has been implicitly included in a number of international conventions, such as the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (art. 4 (3)), the United Nations Framework Convention on Climate Change (art. 3 (3)), the Treaty establishing the European Community as amended by the Treaty of Amsterdam (art. 174 (former art. 130r)) and the Vienna Convention for the Protection of the Ozone Layer (art. 2).[180]

69. Since the 1990s, it has been argued that the precautionary principle has become a principle of "customary international environmental law" or even general international customary law.[181] In his dissenting opinion in the International Court of Justice judgment in the *Pulp Mills* case, Judge ad hoc Vinuesa concluded that the precautionary principle "indisputably is at the core of environmental law", saying "in my opinion, the precautionary principle is not an abstraction or an academic component of desirable soft law, but a rule of law within general international law as

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[175] See, for example, principle 15 of the Rio Declaration on Environment and Development.

[176] Ibid.

[177] See the Separate Opinion by Judge Cançado Trinidade, *Pulp Mills on the River Uruguay*, para. 62. See also Arie Trouwborst, *Precautionary Rights and Duties of States* (Leiden, Martinus Nijhoff Publishers, 2006).

[178] See the draft articles on prevention of transboundary harm, art. 3, commentary para. (14).

[179] Ibid., art. 10, commentary paras. (6)-(7).

[180] Ibid., para. (7).

[181] See in more detail: Ronnie Harding and Elizabeth Fisher, eds., *Perspectives on the Precautionary Principle* (Sydney, Federation Press, 1995), p. 5; Arie Trouwborst, "The precautionary principle in general international law: combating the Babylonian confusion", *Review of European Community & International Environmental Law*, vol. 16, No. 2 (2007), p. 189; Cesare P. R. Romano, "L'obligation de prévention des catastrophes industrielles et naturelles", p. 396.

it stands today".[182] The Court has not, however, yet acknowledged the principle as such.[183]

C. International cooperation on prevention

70. The International Law Commission has reaffirmed the duty to cooperate in article 5 of its draft articles on the present topic and, in article 5 bis, adopted in 2012, has given a non-exhaustive enumeration of the forms that cooperation may take in the context of relief. Cooperation is also at the centre of the horizontal (international) dimension of prevention. In his fifth report, the Special Rapporteur briefly touched upon cooperation as it relates to disaster preparedness prevention and mitigation. As noted therein, cooperation relates to nearly all aspects of disaster prevention, including cooperation on search and rescue arrangements, standby capacity requirements, early warning systems, exchange of information pertaining to risk assessment and identification, contingency planning and capacity-building.[184]

71. The duty to cooperate is a well-established principle of international law. As the Special Rapporteur noted in his second report, it is enshrined in numerous international instruments, including the Charter of the United Nations. As formulated in the Declaration on Principles of International Law concerning Friendly Relations and Cooperation among States in accordance with the Charter of the United Nations, the purpose of cooperation is, in part, "to promote international economic stability and progress" and "the general welfare of nations".[185]

72. The duty to cooperate is also well established in connection with prevention. It has been reiterated by the General Assembly in numerous resolutions that address disaster prevention and disaster risk reduction. In establishing the International Decade for Natural Disaster Reduction, the Assembly recognized the responsibility of the United Nations to cooperate to mitigate risk, including through prevention and early warning, while calling upon States to cooperate to reduce natural hazards.[186] In more recent resolutions, the Assembly has urged the international community "to reduce the adverse effects of natural disasters" through cooperation.[187] International cooperation is to be undertaken in order to support national efforts for prevention,[188] especially "to increase the capacity of countries to respond to the negative impacts of all natural hazards, ... particularly in developing countries".[189] The Hyogo Framework for Action was adopted in large part to encourage cooperation in prevention, both among States and between States and non-State actors.[190] As has been explained, the Hyogo Framework for Action "is the guiding document in strengthening and building international cooperation to ensure

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[182] *Pulp Mills on the River Uruguay*.

[183] Cass R. Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (New York, Cambridge University Press, 2005); Linda Cameron, "Environmental risk management in New Zealand — is there scope to apply a more generic framework?", New Zealand Treasury Policy Perspectives Paper 06/06 (2006).

[184] A/CN.4/652, paras. 114-115.

[185] General Assembly resolution 2625 (XXV), annex, para. 1.

[186] General Assembly resolution 42/169, paras. 7-8.

[187] General Assembly resolution 58/215, para. 2.

[188] See, for example, General Assembly resolution 60/196, para. 2.

[189] General Assembly resolution 59/233, para. 12. See also resolution 60/196.

[190] Hyogo Framework for Action, chap. I, resolution I, para. 4.

that disaster risk reduction be used as a foundation for sound national and international development agendas".[191] This is confirmed by the language of the Framework, which stresses the importance of cooperation with regard to disaster prevention: "We are determined to reduce disaster losses of lives and other social, economic and environmental assets worldwide, mindful of the importance of international cooperation, solidarity and partnership, as well as good governance at all levels."[192]

73. Non-binding declarations have referred to cooperation when underscoring the duty to prevent. For example, the Yogyakarta Declaration on Disaster Risk Reduction in Asia and the Pacific 2012 called upon stakeholders to "enhance and support regional cooperation mechanisms and centers on disaster information management" relating to local risk assessment and financing.[193] Likewise, the Declaration of Panama placed cooperation as central to the "prevention and mitigation of risks and natural disasters". Heads of State and/or Government pledged "to foster international co-operation and capacity-building in the area of natural disasters, in enhancing the provision of humanitarian assistance at all stages of a disaster and in promoting a culture of prevention and early warning systems".[194]

74. Cooperation is embedded in the regional organs and platforms concerned with prevention, including the Regional Platform for Disaster Risk Reduction in the Americas, the Arab Strategy for Disaster Risk Reduction 2020, the Asian Ministerial Conference on Disaster Risk Reduction, the European Forum for Disaster Risk Reduction, the Pacific Platform for Disaster Risk Management and the Africa Regional Strategy for Disaster Risk Reduction. For example, the European Forum has noted that it "will serve as a venue for ... information sharing, exchange of knowledge and ideas and facilitation of cooperation".[195] To this end, the European Forum has "identified specific opportunities for cross-fertilization between countries and sub-regions for exchanging knowledge and information, as well as inter-government and inter-sector cooperation".[196] In addition, the Extended Programme of Action for the Implementation of the Africa Regional Strategy for Disaster Risk Reduction (2006-2015) identified cooperation as a major area of activity relating to risk assessment. It stressed cooperation "regionally and internationally to assess and monitor regional and transboundary hazards".[197] Regional cooperation is said to be important as it allows for the efficient use of resources and reduces duplicative efforts.[198]

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[191] See www.unisdr.org/we/coordinate.

[192] Hyogo Framework for Action, fifth preambular paragraph.

[193] Adopted by the Fifth Asian Ministerial Conference on Disaster Risk Reduction, held in Yogyakarta, Indonesia, in 2012.

[194] Adopted at the Fourth Summit of Heads of State and/or Government of the Association of Caribbean States, held in Panama City in July 2005.

[195] See www.preventionweb.net/files/19800_efdrrwebfinal.pdf.

[196] Ibid.

[197] Extended Programme of Action for the Implementation of the Africa Regional Strategy for Disaster Risk Reduction (2006-2015) and declaration of the second African Ministerial Conference on Disaster Risk Reduction 2010, p. 45.

[198] Hyogo Framework for Action, "Implementing the Hyogo Framework for Action in Europe: Advances and Challenges", p. 40, available from www.unisdr.org/files/19690_hfareportwebfinal.pdf.

75. As a legal duty, international cooperation for disaster prevention finds its source in bilateral and multilateral treaties concluded between States or between States and international organizations. As an example of the latter, a 2000 framework agreement between the Caribbean Community and Japan specifically addressed cooperation for disaster prevention. The framework resolved "to promote co-operation for ... preventive action and rehabilitation", as well as stressing that "international co-operation should be promoted to strengthen the institutional capacity of the regional and national agencies concerned with disaster prevention emergency response and management".[199]

1. Bilateral instruments

76. Many States have concluded bilateral agreements specially addressing cooperation in disaster prevention.[200] Examples are the agreements between Argentina and Spain,[201] Guatemala and Mexico,[202] Germany and Hungary,[203] France and Italy,[204] the Republic of Korea and Poland,[205] Poland and Hungary,[206] Poland and Ukraine,[207] Poland and the Russian Federation,[208] the Russian Federation and Greece,[209] Switzerland and Italy,[210] the United States and the

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[199] A New Framework for CARICOM-Japan Cooperation for the Twenty-First Century, sect. 1-1.

[200] See A/CN.4/590, para. 43.

[201] Agreement on Cooperation on Disaster Preparedness and Prevention, and Mutual Assistance in the Event of Disasters, of 3 June 1988, Argentina-Spain, United Nations, *Treaty Series*, vol. 1689, No. 29123, p. 23.

[202] Agreement on Cooperation for Natural Disasters Prevention and Rehabilitation, of 10 April 1987, Guatemala-Mexico, United Nations, *Treaty Series*, vol. 1509, No. 26055, p. 3.

[203] Agreement between the Government of the Federal Republic of Germany and the Government of the Republic of Hungary on Matters of Common Interest Relating to Nuclear Safety and Radiation Protection, of 26 September 1990, United Nations, *Treaty Series*, vol. 1706, No. 29504, p. 263.

[204] Convention in the Area of the Prediction and Prevention of Major Risks and on Mutual Assistance in the Event of Natural or Man-Made Disasters, France-Italy, 16 September 1992, United Nations, *Treaty Series*, vol. 1962, No. 33532, p. 369.

[205] Agreement on Scientific and Technological Cooperation, of 29 June 1993, Republic of Korea-Poland, United Nations, *Treaty Series*, vol. 1847, No. 31455, p. 289.

[206] Agreement between the Government of the Republic of Poland and the Republic of Hungary on Cooperation and Mutual Aid in Preventing Catastrophes, Natural Disasters and other Serious Events and in Eliminating their Effects, of 6 April 2000.

[207] Agreement between the Government of the Republic of Poland and the Cabinet of Ministers of Ukraine on Cooperation and Mutual Aid in Preventing Catastrophes, Natural Disasters and other Serious Events and in Eliminating their Effects, of 19 July 2002.

[208] Agreement between the Government of the Republic of Poland and the Government of the Russian Federation on Cooperation Preventing the Technological and Natural Disasters and Elimination of their Effects, of 25 August 1993.

[209] Agreement between the Government of the Hellenic Republic and the Government of the Russian Federation on Cooperation in the Field of Prevention and Response to Natural and Man-Made Disasters, of 21 February 2000.

[210] Agreement between the Swiss Confederation and the Italian Republic on Cooperation in the Area of Risk Management and Prevention and on Mutual Assistance in the Event of Natural and Man-Made Disasters, of 2 May 1995.

Russian Federation,[211] the United States and Poland,[212] the United States and Bulgaria,[213] the United States and Ukraine,[214] the United States and the Philippines,[215] Uruguay and Spain,[216] Spain and Mexico,[217] the Russian Federation and Spain,[218] and France and Malaysia.[219] The last-mentioned agreement provides an illustrative example of the type of language in these agreements that speaks to the importance of cooperation: "Convinced of the need to develop cooperation between the competent organs of both Parties in the field of the prevention of grave risks and the protection of populations, property and the environment."[220]

77. By way of illustration, one of the earliest examples of a bilateral agreement addressing disaster risk reduction is that concluded between the United Kingdom of Great Britain and Northern Ireland and the United States in 1958, which includes elements to improve technology in forecasting, information sharing and early warning for hurricanes. The agreement was for a "cooperative meteorological program" for the purpose of achieving "greater accuracy and timeliness in forecasts of hurricanes and in warnings of accompanying destructive winds, tides, and floods".[221]

78. The United States has also concluded several bilateral agreements with other countries that address both disaster prevention and management. An agreement

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[211] Memorandum of Understanding between the Government of the Russian Federation and the Government of the United States of America on Cooperation in Natural and Man-Made Technological Emergency Prevention and Response, of 16 July 1996, United Nations, *Treaty Series*, vol. 2262, No. 40312, p. 583.

[212] Protocol of Intentions between the Federal Emergency Management Agency (United States of America) and the Ministry of Defence of the Republic of Poland on Cooperation in Natural and Man-made Technological Emergency Prevention and Response, of 9 May 2000.

[213] Protocol of Intentions between the Federal Emergency Management Agency (United States of America) and the Ministry of Defence of the Republic of Bulgaria on Cooperation in Natural and Man-made Technological Emergency Prevention and Response, of 24 January 2000.

[214] Memorandum of Understanding between the Government of the United States of America and the Government of the Ukraine on Cooperation in Natural and Man-made Technological Emergency Prevention and Response, of 5 June 2000.

[215] Protocol of Intentions between the Government of the United States of America and the Republic of the Philippines Concerning Cooperation and Disaster Prevention and Management, of 20 November 2001.

[216] Agreement between the Ministry of National Defence of the Eastern Republic of Uruguay and the Ministry of the Interior of the Kingdom of Spain on Scientific and Technological Cooperation and Mutual Assistance in Civil Defence and Disaster Prevention, 25 September 1997.

[217] Agreement between the Ministry of the Interior of the Kingdom of Spain and the Ministry of the Interior of the United Mexican States on Scientific and Technological Cooperation and Mutual Assistance in Civil Defence and Disaster Prevention, 1997.

[218] Agreement on Cooperation on Disaster Preparedness and Prevention, and Mutual Assistance in the Event of Disasters, Russian Federation-Spain, of 14 June 2000, United Nations, *Treaty Series*, vol. 2153, No. 37586, p. 57.

[219] Agreement between the Government of the French Republic and the Government of Malaysia on Cooperation in the Field of Disaster Prevention and Management and Civil Security, 25 May 1998.

[220] Ibid., fourth preambular paragraph (original French).

[221] Exchange of Notes between the United Kingdom and the United States of America Constituting an Agreement for the Continued Operation of Hurricane Research Stations in the Cayman Islands established under the Agreement of 30 December 1958 as amended by the Agreement of 15 February 1960, of 23 November and 12 December 1966, United Nations, *Treaty Series*, vol. 603, No. 8735, p. 235.

concluded with Poland indicated that "the Parties intend to cooperate in natural and man-made technological disaster mitigation, preparedness, response, and recovery in the areas of training, expert assistance and exchange of experiences".[222] The activities primarily concerned were training and the exchange of information.[223] A similar agreement, signed with the Philippines, expressed the desire of both countries to "further cooperative activities in disaster prevention and management through a framework of collaboration that facilitates the exchange of expertise, knowledge, and information, and the transfer of new technology in emergency management".[224]

79. More than two decades ago, France signed bilateral agreements with Italy and Greece to address major risks that could lead to natural disasters. The agreement with Greece, signed in 1989, concerned cooperation on major natural risks and outlined activities to predict and prevent risks and to mitigate their effects.[225] A similar agreement with Italy, signed in 1992, covered prediction and prevention of risks, including through information exchange, as part of a broader agreement addressing both pre-disaster prevention and disaster response.[226]

80. In 2000, Greece and the Russian Federation signed a bilateral agreement for the purpose of cooperation in "prevention and response to natural and man-made disasters".[227] The agreement defined "emergency prevention" as "a set of measures taken in advance and aimed at a maximum possible reduction of emergency risk, protection of health of population, diminishing damage for natural environment and material losses in case of emergency".[228] This agreement mentioned a range of activities specifically geared towards disaster prevention, including through environmental monitoring, assessment of risk and exchange of information.[229]

81. Other bilateral agreements concluded by States for a purpose other than risk reduction included provisions on disaster prevention. A bilateral agreement concluded in 2002 between South Africa and Nigeria referred to capacity-building and exchange of information for public health issues, including "emergency

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[222] Protocol of Intentions between the Federal Emergency Management Agency (United States of America) and the Ministry of Defence of the Republic of Poland on Cooperation in Natural and Man-made Technological Emergency Prevention and Response, of 9 May 2000.

[223] Ibid.

[224] Protocol of Intentions between the Government of the United States of America and the Republic of the Philippines Concerning Cooperation in Disaster Prevention and Management, of 20 November 2001.

[225] Convention on the Method of the French-Hellenic Cooperation on Major Natural Risks, France-Greece 1989. Under article 1, the Governments "coopèrent dans le domaine des risques naturels majeurs. Leur coopération vise à: La prévision des risques, quand celle-ci est possible; la prévention des risques, soit pour éviter qu'ils dégénèrent en catastrophe, soit pour en atténuer les effets".

[226] Convention in the Area of the Prediction and Prevention of Major Risks and on Mutual Assistance in the Event of Natural or Man-Made Disasters, France-Italy, 16 September 1992, United Nations, *Treaty Series*, vol. 1962, No. 33532.

[227] Agreement between the Government of the Hellenic Republic and the Government of the Russian Federation on Cooperation in the Field of Prevention and Response to Natural and Man-Made Disasters, of 21 February 2000.

[228] Ibid., art. 1.

[229] Ibid., art. 3.

preparedness and response".[230] An agreement concluded between Germany and Austria in 1988 primarily concerning cooperation in disaster response also included provisions on disaster prevention.[231] Under this agreement, the two States were to cooperate "in preventing and countering disasters or serious accidents, by exchanging all relevant scientific and technical information ... In exchanging information of risks and damage which may affect the territory of the other Contracting State this exchange of information shall include precautionary data measurements".[232] A similar bilateral agreement signed between Belgium and France in 1981 included an article specifically on disaster prevention relating to forecasting and prevention.[233] This agreement included pledges to exchange information relating to forecasting and prevention.[234]

2. Multilateral instruments

82. The Special Rapporteur turns now to the examination of the text of multilateral instruments, both global and regional, concerned with the prevention of any disaster, regardless of its transboundary effects. In assessing each instrument, the discussion focuses on States' obligations to adopt or implement appropriate legislative and regulatory measures to fulfil their preventive obligations. Such "necessary measures" are the hallmark of due diligence and may serve to tie these instruments to a more general duty to prevent and mitigate disasters.

83. There is no comprehensive international instrument obliging States to prevent natural or man-made disasters. Instead, the international system has to date followed a piecemeal approach when including disaster risk reduction in treaty obligations, either focusing on the kind of disaster (e.g. industrial or nuclear accidents) or the kind of State response activity (e.g. telecommunications assistance). Taken together, these instruments contain common language revolving around States' due diligence obligations regarding the prevention and mitigation of certain disasters.

84. In 1980, the Office of the United Nations Disaster Relief Coordinator published a compendium of legal arrangements for disaster prevention and mitigation,[235] it being a "comprehensive review of existing knowledge of the causes and characteristics of national phenomena and the preventive measures which may be taken to reduce or eliminate their impact on disaster-prone developing countries".

(a) Global instruments

85. The first global international treaty that may be said to have addressed, albeit indirectly, the question of prevention is the United Nations Convention on the Law

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[230] Agreement between the Government of the Republic of South Africa and the Government of the Federal Republic of Nigeria on Cooperation in the Field of Health and Medical Sciences, of 28 March 2002.

[231] Agreement between the Republic of Austria and the Federal Republic of Germany Concerning Mutual Assistance in the Event of Disasters or Serious Accidents, of 23 December 1988, United Nations, *Treaty Series*, vol. 1696, No. 29224.

[232] Ibid., art. 13.

[233] Convention between the Government of the French Republic and the Government of the Kingdom of Belgium on Mutual Assistance in the Event of Disasters or Serious Accidents (signed on 12 April 1981).

[234] Ibid., art. 11.

[235] Office of the United Nations Relief Coordinator, *Disaster Prevention and Mitigation: A Compendium of Current Knowledge*, vol. 9, *Legal Aspects* (United Nations, New York, 1980).

of the Sea,[236] article 145 of which, on the protection of the marine environment, provides that "necessary measures shall be taken in accordance with this Convention ... to ensure effective protection for the marine environment from harmful effects which may arise from such activities".[237] Mention should also be made in this connection of the Convention on the Law of the Non-navigational Uses of International Watercourses, which requires watercourse States to prevent and mitigate harm to other watercourse States.[238] It should be observed, however, that these prevention provisions were very much environmental law-oriented, as were most of the similar pronouncements referring to prevention made in the last two decades of the twentieth century.[239]

86. As observed by the Secretariat, "the closest contemporary global international convention dealing with the prevention and mitigation of disasters" is the Framework Convention on Civil Defence Assistance of 2000.[240] Currently with 14 States parties and 12 signatories, it entered into force in 2001 and aims to promote cooperation among State civil defence authorities "in terms of prevention, forecasting, preparedness, intervention and post-crisis management".[241] Although most of the Convention covers inter-State assistance after a disaster has occurred, it also envisages prevention as a key element of "assistance".[242] It provides for a general requirement for States parties to "undertake to explore all possibilities for co-operation in the areas of prevention, forecasting, preparation, intervention and post-crisis management".[243]

87. Aside from the Civil Defence Framework Convention, the Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations is often cited as one of the global instruments to address disaster risk reduction.[244] It expressly makes prediction and mitigation of

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[236] See footnote 153 above.

[237] Ibid., art. 145.

[238] General Assembly resolution 51/229, annex.

[239] Such as the Vienna Convention for the Protection of the Ozone Layer (1985) and its Montreal Protocol on Substances that Deplete the Ozone Layer (1997), in addition to the Convention on Biological Diversity (1992), eighth and ninth preambular paragraphs.

[240] A/CN.4/590, para. 36. It should also be noted that the Convention and Statute establishing an International Relief Union, of 1927, made one of its objectives the prevention of disasters (art. 2 (2)). The Union was, however, formally replaced by the United Nations Educational, Scientific and Cultural Organization in 1968, which did not include disaster prevention among its objectives. See Barbara Nicoletti, "The prevention of natural and man-made disasters: what duties for States", p. 183, note 24.

[241] Framework Convention on Civil Defence Assistance, United Nations, *Treaty Series*, vol. 2172, No. 38131, preamble.

[242] Ibid. Article 1 (d) defines "assistance" as "any action undertaken by the Civil Defence Service of a State for the benefit of another State, with the objective of preventing, or mitigating the consequences of disasters".

[243] Ibid., art. 4.

[244] See, for example, paragraph 37 above and Barbara Nicoletti, "The prevention of natural and man-made disasters: what duties for States", p. 184 (each discussing only the Civil Defence Framework Convention and the Tampere Convention as creating international disaster risk reduction obligations).

disasters a priority in the area of telecommunication assistance.[245] The Convention obliges States to cooperate with other States, "non-State entities" and intergovernmental organizations to facilitate the use of telecommunication resources for disaster mitigation,[246] which the Convention defined as "measures designed to prevent, predict, prepare for, respond to, monitor and/or mitigate the impact of, disasters".[247] To achieve this duty of cooperation, States may deploy equipment to "predict, monitor and provide information" about disasters,[248] share information among themselves about potential disasters[249] and provide "prompt telecommunication assistance to mitigate the impact of a disaster".[250] Thus, just as the Civil Defence Framework Convention, the Tampere Convention requires States only to "cooperate" with other States in disaster risk reduction. An obligation to prevent disasters within State borders can, however, be inferred from this duty to cooperate and from the other articles of the Convention. The Convention creates an internal obligation of States to "reduce or remove regulatory barriers to the use of telecommunication resource for disaster mitigation and relief".[251] Thus, a State party's duty to use telecommunications to mitigate disasters includes an obligation to take appropriate legislative and regulatory measures to promote disaster mitigation, which mirrors the traditional "due diligence" obligation identified in international environmental law instruments.

88. A duty of due diligence can also be read into global instruments covering specific types of potential disasters. Unlike the Civil Defence Framework Convention and the Tampere Convention, conventions covering industrial accidents, nuclear safety and environmental harm do not directly mention disaster situations. Given the definition by the International Law Commission of "disaster" in draft article 3 of its draft articles on the present topic, each instrument addresses conditions that can rise to the level of a disaster if they cause "widespread loss of life, great human suffering and distress, or large-scale material or environmental damage, thereby seriously disrupting the functioning of society". For example, the Convention on the Transboundary Effects of Industrial Accidents applies to the prevention of, preparedness for and response to industrial accidents "capable of causing transboundary effects", including those caused by natural disasters.[252] The Convention on the Prevention of Major Industrial Accidents (Convention No. 174), adopted under the auspices of the International Labour Organization in 1993,[253] recognizes "the need to ensure that all appropriate measures are taken to: (a) prevent major accidents; (b) minimize the risks of major accidents; and (c) minimize the effects of major accidents".

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[245] Tampere Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations, United Nations, *Treaty Series*, vol. 2296, No. 40906, arts. 3 (1)-3 (2). In article 1 (15), the Convention also defines "telecommunications" as "any transmission, emission, or reception of signs, signals, writing, images, sounds or intelligence of any nature, by wire, radio, optical fibre or other electromagnetic system".

[246] Ibid., art. 3 (1).

[247] Ibid., art. 1 (7).

[248] Ibid., art. 3 (2) (a).

[249] Ibid., art. 3 (2) (b).

[250] Ibid., art. 3 (2) (c).

[251] Ibid., art. 9 (1).

[252] Convention on the Transboundary Effects of Industrial Accidents, United Nations, *Treaty Series*, vol. 2105, No. 36605, art. 2 (1).

[253] Convention on the Prevention of Major Industrial Accidents (Convention No. 174), preamble.

89. The Convention on the Transboundary Effects of Industrial Accidents obliges States parties to "take appropriate measures" to prevent industrial accidents through "preventive, preparedness and response measures".[254] States parties must take "appropriate legislative, administrative and financial measures" to implement their prevention obligations[255] and establish emergency preparedness mechanisms to respond to industrial accidents.[256] For example, the Convention states that "the Parties shall take appropriate measures for the prevention of industrial accidents, including measures to induce action by operators to reduce the risk of industrial accidents".[257] Thus, although States are required under the Convention only to take steps to prevent transboundary accidents, the accidents themselves, especially in the case of natural disasters, occur within the State, and the State's due diligence obligation revolves around domestic prevention of internal industrial accidents.

90. A specific type of man-made disaster can arise as a result of nuclear activity. Several instruments refer to prevention in this context. Under the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, the general provisions require States to cooperate to minimize the consequences of a nuclear disaster by entering into agreements "for preventing or minimizing injury and damage which may result in the event of a nuclear accident or radiological emergency".[258] Similarly, the Convention on Nuclear Safety seeks to "prevent accidents with radiological consequences and to mitigate such consequences should they occur". This convention, unlike the Convention on the Transboundary Effects of Industrial Accidents, does not apply only to activities that may cause harm to other States. Instead, it applies to any civilian nuclear installation regardless of its potential transboundary harm. Although the Convention never expressly articulates a duty of States to prevent nuclear accidents, it is clear that the entire object and purpose of the Convention is to create international obligations to promote nuclear safety in order to prevent nuclear disasters.[259] Moreover, the Convention requires States parties to take "legislative, regulatory and administrative measures and other steps necessary" for implementing it.[260] The Convention works in conjunction with the 1986 Convention on Early Notification of a Nuclear Accident. That convention, with 115 States parties, establishes a notification system through the International Atomic Energy Agency for any nuclear accident that has the potential for transboundary harm to another State.[261] It mandates States to notify those States that could be affected by significant nuclear accidents listed in article 1 not only about the existence of the harm but also about information relevant for mitigation damage.[262]

91. Core international environmental law instruments also require States to take preventive steps regarding potential environmental disasters. The United Nations Framework Convention on Climate Change, for example, recognizes that "Parties

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[254] Art. 3 (1).

[255] Art. 3 (4).

[256] Art. 8 (1).

[257] Art. 6 (1).

[258] Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, United Nations, *Treaty Series*, vol. 1457, No. 24643, arts. 1 (1) and 1 (2).

[259] International Atomic Energy Agency, INFCIRC/449, art. 1 (iii).

[260] Ibid., art. 4. See also art. 7.

[261] Convention on Early Notification of a Nuclear Accident, United Nations, *Treaty Series*, vol. 1439, No. 24404, art. 1 (1).

[262] Ibid., art. 2.

should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects."[263] The Convention specifically requires developed countries listed under its Annex I to adopt national policies to mitigate climate change through the reduction of greenhouse gas emissions[264] and commits all parties to formulate and implement domestic measures to mitigate climate change.[265] It is important to note that, under the Convention, States' duties to mitigate climate change and its resulting effects do not depend on transboundary harm to other States. Instead, the Convention applies to all anthropogenic emissions of greenhouse gas emissions, regardless of their potential effect on other countries. Moreover, in 2007, the States parties to the Convention recognized the link between climate change and disaster risk reduction by adopting the Bali Action Plan, in which States were called upon to adapt their national climate change plans to reflect "disaster reduction strategies".[266]

92. Other environmental conventions on specific areas such as biological diversity, desertification and environmental impact assessments also incorporate a duty to prevent in circumstances that could become disasters. For example, although the Convention on Biological Diversity focuses on responsibility for transboundary environmental damage,[267] it also requires each State party to develop national strategies on environmental conservation[268] and implement procedures for environmental impact assessments for projects likely to have significant adverse effects on biological diversity.[269] Similarly, the United Nations Convention to Combat Desertification calls upon States to implement programmes to "combat desertification and/or mitigate the effects of drought"[270] through appropriate and necessary legislation and regulatory measures[271] and national action programmes encompassing early warning systems.[272] Lastly, the Convention on Environmental Impact Assessment in a Transboundary Context sets out the obligations of States parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult one another on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. In particular, it requires States parties to "take all appropriate and effective measures to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities".[273] In this way, the Convention, just as the other environmental treaties, closely tracks article 3 of the draft articles on prevention of transboundary harm, laying down the general duty of States to prevent significant transboundary harm.

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263 United Nations Framework Convention on Climate Change, United Nations, *Treaty Series*, vol. 1771, No. 30822, art. 3 (3).

264 Ibid., art. 4 (2) (a).

265 Ibid., art. 4 (1) (b).

266 FCCC/CP/2007/6/Add.1, decision 1/CP.13, para. 1 (c) (iii).

267 See Convention on Biological Diversity, United Nations, *Treaty Series*, vol. 1760, No. 30619, art. 3.

268 Ibid., arts. 6-7.

269 Ibid., art. 14.

270 United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, United Nations, *Treaty Series*, vol. 1954, No. 33480, art. 3.

271 See ibid., arts. 4-5.

272 Ibid., art. 10 (3) (a).

273 Convention on Environmental Impact Assessment in a Transboundary Context, United Nations, *Treaty Series*, vol. 1989, No. 34028, art. 2 (1).

93. Moreover, although many environmental conventions focus on the duty to prevent deleterious transboundary effects, there is significant overlap between the topics covered by these conventions and disaster situations. These international instruments are also constructive because they each contain a duty of due diligence.

(b) Regional instruments

(i) Asia

94. In Asia and the Pacific, the ASEAN Agreement on Disaster Management and Emergency Response is the most specific and comprehensive international instrument binding States to prevent and mitigate disasters through the adoption of disaster risk reduction mechanisms. The treaty, signed in 2005, entered into force in 2009 and has been ratified by all 10 States members of ASEAN. It aims to "provide effective mechanisms to achieve substantial reduction of disaster losses in lives and in the social, economic and environmental assets of the Parties, and to jointly respond to disaster emergencies".[274] It states that States parties "shall give priority to prevention and mitigation, and thus shall take precautionary measures to prevent, monitor and mitigate disasters".[275] In terms of mitigation, it expressly requires that States parties "immediately respond to a disaster occurring within their territory",[276] and each of these obligations must be met by taking necessary legislative and administrative measures.[277]

95. The Agreement contains three primary categories of disaster risk reduction obligations: risk identification and monitoring; prevention and mitigation; and disaster preparedness. First, States parties must identify all disaster risks within their territory and assign disaster risk levels to each potential hazard.[278] Second, article 6 requires States parties, jointly or individually, to "identify, prevent and reduce risks arising from hazards".[279] The Agreement then places the onus on "each Party" to adopt and implement legislative and regulatory measures on disaster mitigation and to strengthen local and national disaster management plans.[280] Lastly, States parties have a duty to prepare for disasters by establishing and maintaining "national disaster early warning arrangements"[281] and by developing strategies and response plans to reduce losses from disasters.[282] Together, these provisions create a comprehensive duty on all States members of ASEAN to take measures necessary to prevent, prepare for and mitigate disasters.

96. Other (non-binding) agreements in Asia also encourage States to work individually and together to reduce the risk of disasters. For example, the Asia-Pacific Economic Cooperation (APEC) forum adopted the APEC Framework for Capacity Building Initiatives on Emergency Preparedness, urging States to cooperate in a number of initiatives, including with regard to the legislative frameworks of member States. The APEC Principles on Disaster Response and

[274] Art. 2.
[275] Art. 3 (4).
[276] Art. 4 (b).
[277] Art. 4 (d).
[278] Art. 5.
[279] Art. 6 (1).
[280] Art. 6 (2).
[281] Art. 7.
[282] Art. 8.

Cooperation, adopted in 2008, also call upon individual member States to formulate and implement disaster risk mitigation and preparedness policies and early warning systems.[283] In addition, in the wake of the 2004 tsunami in Asia, the South Asian Association for Regional Cooperation endorsed a new comprehensive framework on early warning and disaster management, in which States committed themselves to developing and implementing risk reduction programmes within their own territories and to providing support to regional early warning systems.[284] In addition, the Delhi Declaration on Disaster Risk Reduction in Asia 2007 includes extensive provisions urging States to implement the Hyogo Framework for Action and to pass and strengthen legislative frameworks for disaster risk reduction.[285] The Dhaka Declaration on South Asia's Environmental Challenges and Natural Disasters calls for regional measures of prevention.[286] The Incheon Declaration on Disaster Risk Reduction in Asia and the Pacific 2010 reaffirms the commitment to the Hyogo Framework for Action and urges Governments and international actors to implement its five priorities for action.[287]

(ii) Africa

97. Various African organizations have established regional and subregional agencies that facilitate information-sharing and capacity-building tools relating to disaster risk reduction. Article 13 (1) (e) of the Constitutive Act of the African Union provides that its Executive Council may "take decisions on policies in areas of common interest to the Member States, including ... environmental protection, humanitarian action and disaster response and relief". Pursuant to this mandate, the African Union and the New Partnership for Africa's Development adopted the Africa Regional Strategy for Disaster Risk Reduction in 2004.[288] The Strategy is intended to facilitate initiatives at the subregional and national levels.[289]

98. In addition, the Economic Community of West African States approved its policy for disaster risk reduction in 2006 and recently established an implementation mechanism on disaster risk reduction, consisting of a ministerial coordination committee and a disaster management task force in the secretariat.[290] That mechanism has a mandate to coordinate State requests for international assistance and the mobilization of emergency response teams for member States. In 2002, the Intergovernmental Authority on Development developed a regional disaster risk management programme addressing issues relating to disaster risk reduction and management, including support for building national legislation on disaster management and identifying opportunities "for agreements on mutual assistance and

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[283] Available from http://aimp.apec.org/Documents/2008/SOM/CSOM/08_csom_020.pdf.

[284] Available from http://saarc-sdmc.nic.in/pdf/framework.pdf.

[285] Available from http://nidm.gov.in/amcdrr/declaration.asp.

[286] Para. 33. Available from www.chu.es/ceinik/tratados/9tratadossobreintegracionycooperacionenasia/93SAARC/IC9314.pdf.

[287] Available from www.unisdr.org/files/16327_incheondeclaration4amcdrrrev3.pdf.

[288] Available from www.unisdr.org/files/13093_AFRICAREGIONALDRRSTRATEGYfullPDF.pdf.

[289] One of the express objectives of the Strategy is to "increase political commitment to disaster risk reduction" (para. 3.2).

[290] The policy is available from www.preventionweb.net/files/4037_ECOWASpolicyDRR.pdf. Under the policy, "national authorities recognize the need to develop and strengthen institutions required to build resilience to hazards", meaning that "political commitment to disaster risk reduction is increasing in the sub-region" (para. 2.2.1).

development in disaster management at regional level and for cross-border agreements on harmonizing disaster management arrangements".[291]

99. Currently, the East African Community is enacting a disaster risk reduction and management bill as an attempt to operationalize article 112 (1) (d) of the Treaty for the Establishment of the East African Community, in which the partner States agreed to take necessary disaster preparedness, management, protection and mitigation measures especially for the control of natural and man-made disasters.[292]

(iii) Arab region

100. In the Arab region, the League of Arab States developed the Arab Strategy for Disaster Risk Reduction 2020, which was adopted by the Council of Arab Ministers Responsible for the Environment at its twenty-second session, on 19 December 2010.[293] The strategy has two purposes: "to outline a vision, strategic priorities and core areas of implementation for disaster risk reduction in the Arab region" and "to enhance institutional and coordination mechanisms, and monitoring arrangements to support the implementation of the Strategy at the regional, national and local level through preparation of a Programme of Action".[294] Deriving from the Hyogo Framework for Action and based on the purpose of the Arab Strategy, five corresponding key priorities were developed: strengthen commitment for comprehensive disaster risk reduction across sectors; develop capacity to identify, assess and monitor disaster risks; build resilience through knowledge, advocacy, research and training; improve accountability for disaster risk management at the subnational and local levels; and integrate disaster risk reduction into emergency response, preparedness and recovery.[295] The implementation of the programme was envisaged in two phases, with a review in 2015, and the expected outcome in 2020 to substantially reduce "disaster losses, in lives and in the social, economic and environmental assets of communities and countries across the Arab region".[296]

(iv) Europe

101. Developments in Europe centre on the involvement of the European Union in prevention, preparedness and mitigation strategies originally referred to as civil protection. Since 1985, when a ministerial-level meeting in Rome addressed the issue, several resolutions on civil protection have been adopted, building the foundation on which disaster risk reduction today stands.[297] Civil protection in the Union was lifted to another level with the adoption of the Treaty of Lisbon, which

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[291] Intergovernmental Authority on Development, "Disaster risk management programme for the IGAD region", project 2: elaboration of supporting policies, legislation and agreements for disaster management in member countries (2002), p. 18.

[292] Unpublished.

[293] Available from www.preventionweb.net/english/profesional/publications/v.php?id=18903.

[294] Available from www.preventionweb.net/files/18903_17934asdrrfinalenglishjanuary20111.pdf.

[295] Ibid., p. 4.

[296] Ibid.

[297] Resolution of 25 June 1987 on the introduction of Community cooperation on civil protection; resolution of 13 February 1989 on the new developments in Community cooperation on civil protection; resolution of 23 November 1990 on Community cooperation on civil protection; resolution of 8 July 1991 on improving mutual aid between member States in the event of natural or technological disaster; resolution of 31 October 1994 on strengthening Community cooperation on civil protection; and resolution of 26 February 2001 on strengthening the capabilities of the European Union in the field of civil protection.

entered into force on 1 December 2009. The Treaty on the Functioning of the European Union[298] regulated the competences of the Union organs, including as regards article 196 of the Treaty, on civil protection, and established a legal basis for Union actions thereon.

102. The competence granted in article 196 is only a complementary competence "to carry out actions to support, coordinate or supplement the actions of the Member States, without thereby superseding their competence in these areas".[299] Pursuant to the Treaty:

> 1. The Union shall encourage cooperation between Member States in order to improve the effectiveness of systems for preventing and protecting against natural or man-made disasters. Union action shall aim to:
>
> (a) support and complement Member States' action at national, regional and local level in risk prevention, in preparing their civil-protection personnel and in responding to natural or man-made disasters within the Union;
>
> (b) promote swift, effective operational cooperation within the Union between national civil-protection services;
>
> (c) promote consistency in international civil-protection work.
>
> 2. The European Parliament and the Council, acting in accordance with the ordinary legislative procedure shall establish the measures necessary to help achieve the objectives referred to in paragraph 1, excluding any harmonization of the laws and regulations of the Member States.[300]

103. Lastly, article 222 of the Treaty, known as the "solidarity clause", enshrines an obligation for member States to "act jointly in a spirit of solidarity if a Member State is ... the victim of a natural or man-made disaster".[301] This "hard-law" provision sets the Union apart from other regional coordination schemes: any action taken by it under this provision will need to be enacted within the ordinary legislative procedure (art. 294 of the Treaty) and thereby established as Union law, in the form of regulations, directives and decisions.[302]

104. In 2001, the Union established the Community Mechanism for Civil Protection "to ensure even better protection in the event of natural, technological, radiological and environmental emergencies".[303] The mechanism, which was reformed and updated in 2007,[304] successfully enhanced Union protection strategies in emergencies for the subsequent years, also in third States.[305] Recently, the Union

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[298] Available from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2010:083:0047:0200:en:PDF.

[299] Treaty on the Functioning of the European Union, art. 2 (5).

[300] Art. 196.

[301] Art. 222.

[302] Marco Gestri, "EU Disaster response law: principles and instruments", in Andrea de Guttry, Marco Gestri and Gabriella Venturini, eds., *International Disaster Response Law*, pp. 116-117.

[303] Council Decision of 23 October 2001 establishing a Community mechanism to facilitate reinforced cooperation in civil protection assistance interventions.

[304] Council Decision of 8 November 2007 establishing a Community Civil Protection Mechanism (recast).

[305] See the communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on improving the Community Civil Protection Mechanism (COM (2005) 137 final), p. 2.

proposed a decision on a new reformed Union civil protection mechanism.[306] While the emphasis of the Mechanism in force since 2007 is mainly on preparedness and response, the 2007 reform envisaged some rules on prevention and early warning.[307] The proposal, in comparison, aims to develop an "integrated approach" to disaster management, including prevention, preparedness and response. This would include the establishment of an emergency response centre; the development of reference scenarios for the main types of disaster; the development of contingency plans in member States; and pre-committed civil protection assets (pooling).[308] One specific objective would thus be "to achieve a high level of protection against disasters by preventing or reducing their effects and by fostering a culture of prevention" and "to enhance the Union's state of preparedness to respond to disasters".[309]

105. The involvement of the Union in the implementation of disaster risk reduction can be better appreciated in a number of normative activities carried out at the Union level. In 2008, the European Commission approved a communication on reinforcing the disaster response capacity of the Union, which was a preliminary effort to pave the way towards a Union approach to disaster risk reduction. In 2009, the Commission adopted two communications relating to disaster risk reduction: a community approach on the prevention of natural and man-made disasters[310] and a strategy for supporting disaster risk reduction in developing countries.[311] The former plays a fundamental role in the Union effort towards a common enabling environment for disaster risk reduction.[312] In particular, it identifies specific areas in which action at the Union level could provide added value: establishing a Union-level inventory of existing information and best practices; developing guidelines on hazards and risk mapping; linking actors and policies throughout the disaster management cycle; improved access to early warning systems; and more efficient targeting of community funds.

106. In 1987, the Council of Europe Committee of Ministers adopted resolution 87 (2), creating a cooperation group for the prevention of, protection against and organization of relief in major natural and technological disasters.[313] This intergovernmental forum, now known as the "European and Mediterranean Major Hazards Agreement", fosters research, public information and policy dialogue on disaster-related matters among its 27 member States.

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[306] See the proposal for a decision of the European Parliament and of the Council on a Union Civil Protection Mechanism (COM (2011) 934).

[307] See the communication from the Commission to the Council and the European Parliament on the European Union Strategy for Supporting Disaster Risk Reduction in Developing Countries (COM (2009) 84 final).

[308] See the proposal for a decision of the European Parliament and of the Council on a Union Civil Protection Mechanism (COM (2011) 934).

[309] Proposal for a decision of the European Parliament and of the Council on a Union Civil Protection Mechanism, para. 1.4.2.

[310] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a Community approach on the prevention of natural and man-made disasters (COM (2009) 82 final).

[311] See the communication from the Commission to the Council and the European Parliament on the European Union Strategy for Supporting Disaster Risk Reduction in Developing Countries (COM (2009) 84 final).

[312] See Alessandra La Vaccara, "An enabling environment for disaster risk reduction", in Andrea de Guttry, Marco Gestri and Gabriella Venturini, eds., *International Disaster Response Law*, pp. 199 and 208.

[313] Adopted on 20 March 1987.

107. The Council of Europe has stressed the imperative nature of the duty to prevent and mitigate the risks of nuclear disasters. In resolution 1087 (1996), on the consequences of the Chernobyl disaster, the Council of Europe Parliamentary Assembly recognized that "urgent action is imperative and must be viewed as an overriding priority for the international community" to take "practical steps to avert or at the very least reduce such risks" of a nuclear disaster.[314]

108. European subregional groups have been also active in signing binding agreements containing disaster risk reduction elements. For example, in 1998, the Agreement among the Governments of the Participating States of the Black Sea Economic Cooperation on Collaboration in Emergency Assistance and Emergency Response to Natural and Man-Made Disasters set out procedures to request assistance, required requesting States to "ensure unobstructed receipt and distribution of goods of assistance exclusively among the afflicted population" without discrimination and called upon them to simplify and expedite customs procedures and waive customs fees and charges.[315] In 1992, the States members of the Central European Initiative adopted the Cooperation Agreement on the Forecast, Prevention and Mitigation of Natural and Technological Disasters, requiring member States to cooperate with one another to adopt prevention and mitigation measures.[316] The agreement also sets up a joint committee responsible for developing "procedures for tighter solidarity" for cooperation in response to a disaster.[317]

(v) Latin America and the Caribbean

109. The Inter-American Convention to Facilitate Disaster Assistance, adopted in 1991, is the only regional convention for the entire Americas directly relating to disasters.[318] The Convention, which entered into force in 1996, exclusively focuses on disaster response and is thus of limited value in determining pre-disaster responsibilities of States.

110. At the subregional level, however, agreements place increasing importance on disaster prevention and mitigation. In 1999, the Association of Caribbean States adopted its own treaty on disaster response: the Agreement between Member States and Associate Members of the Association of Caribbean States for Regional Cooperation on Natural Disasters.[319] The Agreement expressly aims to create "a network of legally binding mechanisms that promote co-operation for prevention, mitigation and management of natural disasters.[320] Pursuant to the Agreement, the Contracting Parties agree to promote "the formulation and implementation of standards and laws, policies and programmes for the management and prevention of natural disasters, in a gradual and progressive manner", including through the identification of "common guidelines and criteria" in a number of areas, such as the

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[314] Council of Europe Parliamentary Assembly, resolution 1087 (1996) on the consequences of the Chernobyl disaster, paras. 10-11.

[315] Agreement among the Governments of the Participating States of the Black Sea Economic Cooperation on Collaboration in Emergency Assistance and Emergency Response to Natural and Man-Made Disasters, of 15 April 1998.

[316] Arts. 1-2.

[317] Ibid., arts. 4-5.

[318] See Inter-American Convention to Facilitate Disaster Assistance, of 7 June 1991.

[319] Not yet in force.

[320] Art. 2.

classification of humanitarian supplies and donations.[321] The Agreement has not yet entered into force. The Declaration of Panama,[322] adopted at the Fourth Summit of Heads of State and/or Government of the Association of Caribbean States, affirmed the importance of prevention in reducing vulnerability to disasters in the following terms:

> We acknowledge the vulnerability of our countries and territories to natural disasters and their negative impact on our efforts to ensure sustainable development; we also share the idea that the best way to combat vulnerability to natural disasters is to integrate disaster management and risk reduction into development policies and plans at all levels of our governments. We further reaffirm the importance of international cooperation, particularly at the regional level, in order to strengthen the national and regional bodies dedicated to the prevention and mitigation of risks and natural disasters.

111. Other subregional instruments have established agencies to coordinate disaster risk reduction efforts. For example, in 1991, States members of the Caribbean Community adopted the Agreement Establishing the Caribbean Disaster Emergency Response Agency.[323] The Agreement tasks the Agency with building national capacities for disaster response. States parties commit themselves to taking a number of steps to ensure that their national disaster response systems are adequately prepared.[324] They also commit themselves to reducing legal barriers to the entry of personnel and goods, providing protection and immunity from liability and taxation to assisting States and their relief personnel, and facilitating transit.[325]

112. In addition, in 1993, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama created the Coordination Centre for the Prevention of Natural Disasters in Central America under the Central American Integration System as a specialized agency charged with coordinating implementation of the Regional Disaster Reduction Plan. The Coordination Centre revised its founding agreement in 2003 to reflect principles such as international cooperation, promotion of human rights (including the right to be protected for disasters) and the participation of the public in disaster management planning. The Coordination Centre itself is tasked with facilitating technical assistance and cooperation among member States in disaster prevention and mitigation.

D. National policy and legislation

113. As noted,[326] following the International Decade for Natural Disaster Reduction, States engaged in various actions to unify efforts to better prepare for and reduce the harmful impact of disasters. The resulting two main agreements — the Yokohama Strategy and the Hyogo Framework for Action — both call upon States to implement national legislation that includes disaster prevention, mitigation and preparedness.

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[321] Arts. 4 and 7.

[322] See footnote 194 above.

[323] See Agreement Establishing the Caribbean Disaster Emergency Response Agency, of 26 February 1991.

[324] Art. 4.

[325] Arts. 21-23.

[326] See para. 35 above.

114. As stated above,[327] States have implemented the Hyogo Framework for Action by incorporating disaster risk reduction into national policy and legal frameworks. In the 2011 review, 64 States or areas reported having established specific policies on disaster risk reduction, evenly spread throughout all continents and regions, including the major hazard-prone locations. They are: Algeria, Anguilla, Argentina, Armenia, Bangladesh, Bolivia (Plurinational State of), Brazil, British Virgin Islands, Canada, Cape Verde, Chile, Colombia, Cook Islands, Costa Rica, Côte d'Ivoire, Cuba, Dominican Republic, Fiji, Finland, Georgia, Germany, Ghana, Guatemala, Honduras, India, Indonesia, Italy, Japan, Kenya, Lao People's Democratic Republic, Lebanon, Madagascar, Malawi, Malaysia, Maldives, Marshall Islands, Mauritius, Mexico, Mongolia, Morocco, Mozambique, Nepal, New Zealand, Nicaragua, Nigeria, Norway, Panama, Paraguay, Peru, Poland, Saint Kitts and Nevis, Saint Lucia, Samoa, Senegal, Sri Lanka, Sweden, Switzerland, Syrian Arab Republic, Thailand, The former Yugoslav Republic of Macedonia, United Republic of Tanzania, United States, Vanuatu and Venezuela (Bolivarian Republic of).

115. More recently, UNISDR has identified 76 States that have adopted national platforms, defined as a "coordinating mechanism for mainstreaming disaster risk reduction into development policies, planning and programmes", to implement disaster risk reduction strategies.[328]

116. The Secretariat has pointed out that legal and policy frameworks relating more directly to prevention have typically been implemented at the national level versus the regional or international level.[329] Several countries have adopted legislation specifically addressing disaster risk reduction either as stand-alone legislation or as part of a broader legal framework concerning both disaster risk management and disaster response. States that have enacted national laws envisaging disaster risk reduction include Algeria,[330] Cameroon,[331] China,[332] the Dominican Republic,[333] El Salvador,[334] Estonia,[335] France,[336] Guatemala,[337] Haiti,[338] Hungary,[339] India,[340]

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[327] Ibid.

[328] For a continuously updated list of States that have adopted national platforms, see www.unisdr.org/partners/countries.

[329] A/CN.4/590, para. 33.

[330] Algeria, Risk Prevention and Disaster Management Act of 25 December 2004. Available from www.mtp.gov.dz/GUIDE%20JURIDIQUE/textes-de-portee-generale/5-Loi-n2004-20.pdf.

[331] Cameroon, Arrêté No. 037/PM du 19 mars 2003 portant création, organisation et fonctionnement d'un Observatoire National des Risques.

[332] China, Disaster Prevention and Response Act (2002).

[333] Dominican Republic, Decree No. 874-09 approving the Regulation for the application of Law No. 147-02 on Risk Management and repealing Chapters 1, 2, 3, 4 and 5 of Decree No. 932-03 (2009).

[334] El Salvador, Law on Civil Protection, Disaster Prevention and Disaster Mitigation (2005).

[335] Estonia, Emergency Preparedness Act (2000).

[336] France, Law No. 2003-699 regarding the prevention of technological and natural risks and reparation of damages (2003).

[337] Guatemala, Decree No. 109-96, Law on the National Coordinator for the Reduction of Natural or Man-made Disasters (1996).

[338] Haiti, National Risk and Disaster Management Plan (1988).

[339] Hungary, Act LXXIV on the management and organization for the prevention of disasters and the prevention of major accidents involving dangerous substances (1999).

[340] India, Disaster Management Act, No. 53 (2005). Available from http://indiacode.nic.in/.

Indonesia,[341] Italy,[342] Madagascar,[343] Namibia,[344] New Zealand,[345] Pakistan,[346] Peru,[347] the Philippines,[348] the Republic of Korea,[349] Slovenia,[350] South Africa,[351] Thailand[352] and the United States.[353]

117. By way of illustration, a few examples of the integration of prevention into legislative or policy frameworks may be given. After South Africa passed the Disaster Management Act in 2002, it followed with a detailed policy document on its national disaster management framework. In addition, South Africa has a number of laws relating to disasters, such as fires, and associated with disaster prevention, such as those relating to environmental impact assessments. Namibia has incorporated prevention into its Disaster Risk Management Act of 2012, intended "to provide for an integrated and coordinated disaster management approach that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery".[354] The Philippines has included prevention in governance structures, defining it as:

> The outright avoidance of adverse impacts of hazards and related disasters. It expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance such as construction of dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high-risk zones, and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake.[355]

118. Colombia has recently strengthened its national policy framework relating to disaster management to include prevention under a single comprehensive framework. The National Disaster Risk Management System Act, adopted in April 2012, established a national system for disaster risk management and includes provisions on both disaster prevention and response. It creates a framework with

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[341] Indonesia, Law No. 24 of 2007 Concerning Disaster Management.

[342] Italy, Decree of the Prime Minister to establish a national platform for disaster risk reduction (2008).

[343] Madagascar, Decree No. 2005-866 setting out the manner of application of Law No. 2003-010 of 5 September 2003 on the national risk and disaster management policy (2005).

[344] Namibia, Disaster Risk Management Act (2012).

[345] New Zealand, National Civil Defence Emergency Management Plan Order 2005 (SR 2005/295), part 3.

[346] Pakistan, National Disaster Management Act (2010). See also the official statement of the Government of Pakistan at the third session of the Global Platform for Disaster Risk Reduction, in 2011, available from www.preventionweb.net/files/globalplatform/pakistanofficialstatement.pdf.

[347] Peru, Law No. 29664 creating the National System for Disaster Risk Management (2011).

[348] The Philippines, Philippine Disaster Risk Management Act (2006).

[349] Republic of Korea, National Disaster Countermeasures Act (1995); National Disaster Management Act (2010).

[350] Slovenia, Act on the Protection against Natural and Other Disasters (2006).

[351] South Africa, Disaster Management Act No. 57 of 2002.

[352] Thailand, Disaster Prevention and Mitigation Act (2007).

[353] United States, Disaster Mitigation Act (2000).

[354] Namibia, Disaster Risk Management Act No. 10, 2012, preambular para.

[355] The Philippines, Implementing Rules and Regulations of Republic Act No. 10121, rule 2, sect. 1 (l).

various government bodies such as the Disaster Risk Management Unit and the National Disaster Prevention and Response System.[356]

119. Several States have also implemented policies focused on disaster risk reduction as a supplement to legislation or as stand-alone efforts. For example, Ghana has developed a national disaster risk reduction policy to integrate disaster risk reduction into planning and operation of public institutions. Ghana stated at the third session of the Global Platform for Disaster Risk Reduction, in 2011, that disaster risk reduction was among the key factors in considering good governance and sustainable development.[357] Bangladesh provides another example of robust policies in the absence of a formal law, including the coordination of 12 ministries under a comprehensive disaster management programme and the formulation of a national disaster management plan for the period 2010-2015, a climate change strategy and action plan (2009) and standing orders on disaster.[358]

120. The present section does not purport to deal with an exhaustive list of national disaster risk reduction legislation, but merely attempts to provide an overview of a variety of approaches. Although the analysis below addresses mainly legislation specifically targeted towards disaster management, other types of legislation are also relevant, including weather forecasting, insurance, land use restriction and right-to-know legislation. The last-mentioned legislation will be discussed briefly below. The present section will summarize key elements of disaster management laws from 14 geographically and economically diverse States, some of which were identified in the memorandum by the Secretariat, while others have been chosen to diversify the sampling on the basis of geography and economic development. The present section will explore features of disaster legislation adopted by Algeria,[359] Bolivia (Plurinational State of),[360] Colombia,[361] Costa Rica,[362] Cuba,[363] India,[364] Japan,[365] Nicaragua,[366] the

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[356] World Bank, "For the first time, Colombia has a natural disaster awareness and prevention policy — Colombia's President Juan Manuel Santos", 24 April 2012. Available from http://go.worldbank.org/ZTFL2XNOH0.

[357] See www.preventionweb.net/files/globalplatform/globalplatform2011ghana.docx.

[358] At the third session of the Global Platform, in 2011, the Government of Bangladesh noted that the issue of framing a national disaster management act remained under its active consideration. See http://preventionweb.net/files/globalplatform/bangladeshrevisedstatement.pdf.

[359] See footnote 330 above.

[360] Plurinational State of Bolivia, Risk Reduction and Disaster Attention Act (2000), Law No. 2140. Available from www.fps.gob.bo/uploads/Ley_2140_LEY_PARA_LA_REDUCCION_DE_RIESGOS.pdf.

[361] Colombia, Law No. 1523 of 24 April 2012 adopting the National Policy on Disaster Risk Management and Establishing the National System of Disaster Risk Management and for other purposes. Shortly before the adoption of the law, the World Bank had released a comprehensive study of the disaster risk management policies in Colombia, in which it criticized the country's framework, which may have influenced the shape of the new legislation. See World Bank, *Analysis of Disaster Risk Management in Colombia: A Contribution to the Creation of Public Policies* (Bogota, 2011).

[362] Costa Rica, National Emergency and Risk Prevention Act (2011), Law No. 84488 of 11 January 2006.

[363] Daniel A. Farber and Jim Chen, *Disasters and the Law: Katrina and Beyond* (New York, Aspen Publishers, 2006), pp. 211-212.

[364] See footnote 340 above.

[365] Japan, Disaster Countermeasures Basic Act, Act No. 223 (1961).

[366] Nicaragua, Law No. 337 (2000), Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters.

Philippines,[367] South Africa,[368] Sri Lanka,[369] the United Kingdom,[370] United States[371] and Viet Nam.[372]

121. Before describing in some detail the key elements of the legislation studied, the present section will explore two common aspects of that legislation that demonstrate States' recognition of an obligation to take steps to address disasters. First, the States do not vary widely in determining the scope of the problem that they seek to address. Principally, the legislation aims to protect against both natural and man-made disasters. The major distinction lies in the specificity of examples provided within the text of the legislation. For instance, Sri Lanka includes in its definition of natural or man-made catastrophes a long list of potential qualifying incidents, including landslides, cyclones, fires, chemical accidents, civil or internal strife, nuclear disaster and oil spills.[373] In Nicaragua, the law addresses both natural and man-made disasters, but presents a long list of natural disasters that could qualify without providing a parallel list for man-made disasters.[374] Other States provide a broad definition of disaster without giving more specific examples. For example, the legislation in the Philippines defines "disaster" as "a serious disruption of the functioning of a community".[375] A few laws are specific to floods or storms: although these limitations tend to be reflected in the title, they could potentially apply to both natural and man-made floods.[376] Several States also incorporate a requirement that an event must cause harm to people, property or the economy in order to be truly

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[367] The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), Rep. Act No. 10121 (2009).

[368] See footnote 351 above.

[369] Sri Lanka, Disaster Management Act, No. 13 of 2005, 13 May 2005.

[370] United Kingdom, Flood and Water Management Act (2010). Available from www.legislation.gov.uk/.

[371] United States, Homeland Security Act of 2002, 6 U.S.C. paras. 311-321 (setting forth the mission, obligations and powers of the Federal Emergency Management Agency).

[372] Viet Nam, Ordinance of Prevention and Control of Floods and Storms and Implementation Provisions, No. 09-L/CTN (1993).

[373] Sri Lanka Disaster Management Act, art. 25. See also Algeria, Risk Prevention and Disaster Management Act, arts. 2 and 10 (including earthquakes, floods, fires, industrial and nuclear accidents and health epidemics); and Japan, Disaster Countermeasures Basic Act, art. 2, which indicates that "disaster" refers to a storm, flood, earthquake, tsunami or other unusual natural event, a conflagration or explosion or any other damage of similar extent.

[374] Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, art. 3.

[375] The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), para. 3. See also Plurinational State of Bolivia, Risk Reduction and Disaster Attention Act, art. 1 (protecting against natural, technological and man-made threats); United States, 6 U.S.C. para. 313 (b) (2) (A) (protecting "against the risk of natural disasters, acts of terrorism, and other man-made disasters, including catastrophic incidents"); India, Disaster Management Act, art. 2 ("disaster" refers to natural or man-made catastrophes or accidents or negligence).

[376] See Viet Nam, Ordinance of Prevention and Control of Floods and Storms and Implementation Provisions, art. 2; United Kingdom, Flood and Water Management Act, art. 1 (covering floods and coastal erosion, including dam breaches, but not flooding where high rainfall has caused the sewage system to overflow).

considered a disaster.[377] Read together, however, these laws demonstrate a recognized obligation to craft legislation addressing natural and man-made disasters.

122. A second element of disaster legislation that signals States' obligations is the two distinct methods by which States indicate the object, purpose and goals of the legislation. The more common approach simply declares that the legislation is intended to set forth a framework to manage disaster risks with an aim of preventing disasters, mitigating harm and increasing a State's disaster preparedness.[378] A handful of other States also supplement such statements of purpose with more general goals, such as protecting life,[379] or motivations for the act, such as prior experience

[377] South Africa, Disaster Management Act No. 57 of 2002, para. 1 (Disaster means "a progressive or sudden, widespread or localized, natural or human-caused occurrence which causes or threatens to cause, death, injury or disease, damage to property, infrastructure or the environment, or disruption of the life of a community, and which is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources"); and Colombia, National System for the Management of Risks and Disasters Act, art. 4 (8) (declaring that disasters are the result of natural or unintentional man-made occurrences that cause harm or loss to persons, property, the economy or the environment).

[378] See South Africa, Disaster Management Act No. 57 of 2002, preamble (providing for "a disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery"); Viet Nam, Ordinance on Prevention and Control of Floods and Storms and Implementation Provisions, preamble (sets out provisions for activities conducted for the prevention, control and mitigation of the consequences of floods and storms); United Kingdom, Flood and Water Management Act, preamble (stating that the act is for the management of risks in connection with flooding and coastal erosion); United States, 6 U.S.C. para. 313 (b)(2)(A) (leading "the nation's efforts to prepare for, protect against, respond to, recover from [disasters]"); India, Disaster Management Act, preamble (providing the effective management of disasters); Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, art. 1 (stating that the law's purpose is to establish principles, norms and instruments necessary to create a system for the disaster prevention risk reduction, mitigation and preparedness); Plurinational State of Bolivia, Risk Reduction and Disaster Attention Act, art. 1 (regulating all activities in the field of the reduction of risks and warnings of disasters and emergencies, establishing an institutional framework that reduces risks from disasters and emergencies); Colombia, National System for the Management of Risks and Disasters Act, art. 1 (disaster management, accomplished through a process of policies, strategies plans and regulations, is necessary for reduction of risk, management of risk, and maintenance of the security, well-being and quality of life for persons); and Algeria, Risk Prevention and Disaster Management Act, art. 1 (enacting rules for the prevention of major risks and management of disasters).

[379] See, for example, United States, 6 U.S.C. para. 313 (b) (2) (mission is to reduce the loss of life and property and protect the nation from all hazards). See also Japan, Disaster Countermeasures Basic Act, art. 1 ("For the purpose of protecting the national territory, the life and limb of the citizens and their property, this act shall have for its aim the establishment of a machinery ... the formulation of disaster prevention plans ... ensuring an effective and organized administration of comprehensive and systematic disaster prevention"); the Philippines, Philippine Disaster Risk Reduction and Management Act (2010), para. 2 (identifying the State policy to uphold the right to life and strengthen the country's institutional capacity for disaster risk reduction); and Sri Lanka, Disaster Management Act, preamble (citing the necessity to protect human life and property of the people and environment of Sri Lanka from disasters).

with disasters.[380] Still, for example, the Indian National Disaster Management Act specifically requires measures for the prevention of disasters, the integration of mitigation measures and disaster preparedness capacity-building.[381] The United States adopts a slightly more precise approach, suggesting that the Federal Emergency Management Agency "develop guidance" on "identifying potential hazards and assessing risk and impacts; mitigating the impact of a wide variety of hazards ... managing necessary emergency preparedness and response recourses".[382] These statements of purpose identify prevention, mitigation and preparedness as specific goals of the States. For the sake of coherence, the present section will refer to those three recognized components of the disaster reduction framework in describing the particular features of the States' laws that are of relevance.

1. Risk prevention

123. Risk prevention concerns the actions that States take to minimize the likelihood that a disaster will occur. To that end, the legislation discussed shows three main approaches to realizing this goal: risk assessment, information-sharing and land use controls.

(a) Risk assessment

124. According to the Hyogo Framework for Action, "the starting point for reducing disaster risk and for promoting a culture of disaster resilience lies in the knowledge of the hazards and the physical, social, economic and environmental vulnerabilities to disasters that most societies face, and of the ways in which hazards and vulnerabilities are changing in the short and long term, followed by action taken on the basis of that knowledge".[383]

125. The Framework has as its second priority for action to "identify, assess and monitor disaster risks and enhance early warning". Key activities presented within the framework are to:

(a) Develop, update periodically and widely disseminate risk maps and related information to decision makers, the general public and communities at risk in an appropriate format.

(b) Develop systems of indicators of disaster risk and vulnerability at national and subnational scales that will enable decision makers to assess the impact of disasters on social, economic and environmental conditions and disseminate the results to decision makers, the pubic and populations at risk.

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[380] See, for example, Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, preamble (referencing a handful of motivating factors for adopting the law, among them the United Nations International Decade for Natural Disaster Reduction, the climate phenomena El Niño and La Niña and the country's history of earthquakes, volcanic eruptions, floods, hurricanes and forest fires). See also Viet Nam, Ordinance on Prevention and Control of Floods and Storms and Implementation Provisions, preamble (citing the life and property losses caused by floods and storms).

[381] India, Disaster Management Act, art. 11.

[382] United States, 6 U.S.C. 3211.

[383] Hyogo Framework for Action, para. 17.

(c) Record, analyse, summarize and disseminate statistical information on disaster occurrence, impacts and losses, on a regular basis through international, regional, national and local mechanisms.

126. The Yokohoma Strategy emphasizes as its first principle that "risk assessment is a required step for the adoption of adequate and successful disaster reduction policies and measures",[384] while the General Assembly has stressed the importance of risk assessment at both the national and local levels in order to reduce vulnerability to hazards and to address the adverse impacts of disasters.[385]

127. Risk assessment at the national level is varied owing to financial and scientific constraints, regional and local needs and each State's individual approach. In 2011, 12 of 15 respondents to a survey of States members of the Group of 20 reported conducting national risk assessments, while the remaining 3 reported that risk assessments were in development and were to be implemented as early as 2013.[386] A review of national and local risk assessments on the basis of hazard data and vulnerability information reveals that this is the activity most widely practised as regards any prevention strategy in the Hyogo Framework for Action.[387]

128. There is evidence that States seek assistance for their national assessment of risk. At least 40 countries have sought assistance from the Global Risk Identification Programme of the United Nations Development Programme to improve their knowledge of disaster risk through national risk assessments and national risk information systems.[388] Twelve countries in Latin America and South Asia have sought assistance from the Central American Probabilistic Risk Assessment for technical assistance in risk assessment.[389]

129. Of the 14 States selected for study, a number focus on disaster risk identification, assessment and monitoring. India, for example, requires State-level and district-level plans to identify specific vulnerabilities and develop measures to mitigate harm caused by that vulnerability.[390] In furtherance of these goals, the legislation suggests ensuring that guidelines for prevention and mitigation are followed and examining the construction of buildings to confirm that they are built to appropriate standards for the prevention of disasters.[391] Risk monitoring can take different forms, but generally involves risk assessments and weather forecasting. For example, the Japanese legislation includes a provision that local governments

[384] A/CONF.172/9, chap. I, resolution 1, annex I.

[385] General Assembly resolutions 59/233, para. 3, 61/200, para. 7, and 63/217, para. 10.

[386] See the Group of 20/Organization for Economic Cooperation and Development methodological framework on disaster risk assessment and risk financing. Available from www.oecd.org/gov/risk/G20disasterriskmanagement.pdf.

[387] See the compilation of national progress reports on the implementation of the Hyogo Framework for Action (2009-2011), Hyogo Framework for Action priority 1, core indicator 1.1. Available from www.preventionweb.net/english/hyogo/progress/documents/hfa-report-priority1-1%282009-2011%29.pdf.

[388] Achievements cited include the completion of a national risk assessment and national hazard profile in the Lao People's Democratic Republic, the completion of urban risk assessments in Mexico, Mozambique and Nepal, the establishment of a national disaster observatory in Armenia and the launch of a comprehensive risk assessment in Mozambique.

[389] Bangladesh, Bhutan, Chile, Colombia, Costa Rica, El Salvador, India, Nepal, Pakistan, Panama, Peru and Sri Lanka.

[390] India, Disaster Management Act, art. 21.

[391] Ibid., art. 30.

should engage in weather forecasting to help to prevent disasters caused by storms.[392] In the Philippines, the legislation includes risk assessments and risk knowledge-building.[393] In Viet Nam, the ordinance calls for weather forecasting and tracking and envisages public-private partnership to realize these goals.[394] Similarly, in the Philippines, the legislation requires identifying, assessing and prioritizing hazards and risks,[395] with the aim of consolidating local disaster risk information, including natural hazards, vulnerabilities and climate change risks, to maintain a local risk map.[396]

130. Some States have adopted routine weather monitoring as a means of identifying potential risks. In the United States, for example, the National Weather Service initially began as a means of helping farmers, but its utility for disaster prevention has expanded.[397] Weather forecasting is undertaken by a number of entities in the United States, including the National Weather Service, the Federal Aviation Administration (which provides forecasting to airlines and flights), the National Oceanic and Atmospheric Administration (which uses its systems to implement the country's emergency alert system) and a number of state-level authorities, such as the Utah Department of Transportation (which provides avalanche risk forecasts).[398] In addition, States are cooperating in the development of international weather warning systems under the World Meteorological Organization.[399]

(b) Collection and dissemination of risk information

131. The collection and dissemination of risk information can contribute to prevention in that it reduces vulnerabilities and builds resilience to hazards. The Hyogo Framework for Action explains this purpose: "Disasters can be substantially reduced if people are well informed and motivated towards a culture of disaster prevention and resilience, which in turn requires the collection, compilation and dissemination of relevant knowledge in information of hazards, vulnerabilities and capacities".[400] As further explained in a report on the implementation of the Framework: "Data collection and dissemination processes allow decision makers and the public to understand a country's exposure to various hazards and its social, economic, environmental and physical vulnerabilities. Such information, disseminated in an appropriate and timely manner allows communities to take effective action to reduce risk."[401]

132. Under the third priority of action in the Hyogo Framework for Action, States are to undertake a variety of activities towards this end. They include providing for

[392] Japan, Disaster Countermeasures Basic Act, art. 35.

[393] The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), paras. 3-4 and 12.

[394] Viet Nam, Ordinance on Prevention and Control of Floods and Storms and Implementation Provisions, arts. 10-11.

[395] The Philippines, Philippine Disaster Reduction and Management Act (2010), para. 9.

[396] Ibid., para. 12.

[397] Marsha Baum, *When Nature Strikes: Weather Disasters and the Law* (Westport, Connecticut, Praeger, 2007), p. 3.

[398] Ibid., pp. 9 and 14.

[399] Ibid., p. 15.

[400] Hyogo Framework for Action, para. 18.

[401] Hyogo Framework for Action, "Implementing the Hyogo Framework for Action in Europe: Advances and Challenges", p. 40, available from www.unisdr.org/files/19690_hfareportwebfinal.pdf.

information, management and exchange through activities such as disseminating "easily understandable information on disaster risks and protection options". The Yokohama Strategy called for the collection and dissemination of information "to improve public awareness of natural disasters and the potential to reduce their impact".[402]

133. Data collection and dissemination are part of policies adopted at the national level. For example, China has reported a robust strategy for making risk information available, including through a countrywide public awareness strategy.[403] Other countries have established disaster losses databases so that decision makers are aware of local risks and vulnerabilities.[404]

134. Of the 14 States selected, the legislation adopted in the United Kingdom requires the maintenance of a register of vulnerable structures and suggests dissemination of flood and erosion risk maps and information.[405] In Algeria, the law establishes that citizens have a right to information on any vulnerabilities or risks that they face with regard to disasters, the services that are available to them for risk prevention and the identity of the actors in charge of disaster management.[406] Colombia has established a national information system for disaster risk management, which is specifically tasked with collecting and making available information relating to standards, protocols, technological solutions and processes that can reduce risk. Essentially, this entity acts as the nation's knowledge bank for issues regarding disaster risk reduction.[407]

135. In some cases, industrial accidents have prompted States to adopt stronger regulations that have, as a side effect, reduced risks of man-made disasters through risk identification and information sharing. In 1984, a chemical gas leak in Bhopal, India, killed and injured thousands of people who lived near a chemical plant.[408] In the aftermath of the incident, India passed laws regulating industrial conduct. The Environment (Protection) Act of 1986 prohibits industry, operations or processing from emitting environmental pollutants in excess of prescribed standards.[409] The Manufacture, Storage and Import of Hazardous Chemicals Rules of 1989 establish a duty on pollution control authorities to routinely inspect industrial establishments[410] and require industrial establishments to submit audit reports and emergency disaster management plans.[411]

136. The Bhopal disaster also spurred the requirement for environmental impact assessment statements, mandatory statements that contain information on any potentially adverse impacts on the environment, and proposed disaster management plans to address such adverse impacts, which are another means for risk

[402] A/CONF.172/9, chap. I, resolution 1, annex I, para. 12 (a) (i).
[403] See General Assembly resolution 66/302, annex, para. 8.
[404] Ibid., para. 24.
[405] United Kingdom, Flood and Water Management Act, art. 21.
[406] Algeria, Risk Prevention and Disaster Management Act, art. 11.
[407] Colombia, National System for the Management of Risks and Disasters Act, art. 45.
[408] Julian Francis, "Legal aspects of disaster management and rehabilitation: the recent Indian experience of the tsunami disaster", in *Tsunami and Disaster Management: Law and Governance*, C. Ray Kumar and D. K. Srivastava, eds. (Hong Kong, Sweet & Maxwell Asia, 2006).
[409] Ibid.
[410] Ibid., pp. 246-247.
[411] Ibid.

identification and information-sharing.[412] Industrial regulations can also involve right-to-know provisions, such as the Emergency Planning and Community Right-to-Know Act, adopted by the United States in 1986, which established a toxic release inventory.[413] This law requires public reporting of the release of toxic chemicals.[414] Other groups then use this information to better understand risks, risk distribution and risk reduction.[415]

(c) Land use controls

137. Land use controls are methods by which States seek to prevent either particular activities in specific vulnerable areas or all types of access to a particular area. The extent of the control would probably depend on the probability and severity of the risk posed in a particular area. Algeria, for example, identifies its major objectives as improving risk awareness and risk monitoring, taking into account risks in construction, and putting in place plans to manage all types of disasters.[416] Before indicating a number of specific actions that the State is permitted to adopt within its disaster management plans, the legislation cites five underlying principles that inform the State's policies: the precautionary principle, the principle of co-existence, the principle of preventive action and swift correction, the principle of participation and the principle of the integration of new and innovative techniques.[417] It proposes a prohibition on construction and habitation within zones at risk of earthquakes or floods.[418] Similarly, Costa Rica can declare restrictions on land uses in order to avoid disasters.[419] The United Kingdom also grants itself broad powers to restrict or mandate certain uses of land.[420]

138. India adopted the Coastal Regulation Zone Notification in 1991, which controlled developmental activities within 500 metres of the high tide line as a means of mitigating potential harm caused by tsunamis.[421] Land use controls have also been effective in Cuba, where the Institute of Physical Planning establishes regulations to require that certain construction projects meet minimum safety requirements.[422] These regulations can also prohibit construction entirely in certain locations.[423] The Government of Cuba also promotes urbanization by ensuring that rural populations have access to essential government services; by reducing the size of the urban population, disaster risks that are accentuated by overpopulation can be prevented.[424] By implementing these land use controls, States are attempting to reduce the population's exposure to potential hazards and limit any harm that may result from a disaster in that area. In some cases, however, land use controls are less effective. For

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[412] Ibid., p. 247.

[413] Kim Fortun, "Environmental right-to-know and the transmutations of law", in *Catastrophe: Law, Politics and The Humanitarian Impulse*, Austin Sarat and Javier Lezaun, eds. (Amherst, University of Massachusetts Press, 2009).

[414] Ibid.

[415] Ibid.

[416] Algeria, Risk Prevention and Disaster Management Act, art. 7.

[417] Ibid., art. 8.

[418] Ibid., art. 19.

[419] Costa Rica, National Emergency and Risk Prevention Act, art. 34.

[420] United Kingdom, Flood and Water Management Act, art. 3.

[421] Julian Francis, "Legal aspects of disaster management and rehabilitation", pp. 247-248.

[422] Daniel A. Farber and Jim Chen, *Disasters and the Law*, p. 218.

[423] Ibid.

[424] Ibid.

example, in the United States, certain government restrictions on land usage can be prohibited.[425]

139. Environmental regulations have also been used in the United States and are another type of land use restriction. The destruction of wetlands in Louisiana by industrial development drastically reduced the region's natural ability to withstand hurricanes; however, the Government is able to take steps to control the development of wetland areas under the Clean Water Act.[426] By protecting and regenerating wetlands, the State hopes, among other goals, to reduce harm caused by storms by taking advantage of the natural buffer that these wetlands provide.[427]

140. Although a number of approaches can constitute risk prevention, several disaster risk reduction acts include at least some specific policy suggestions in this area.

2. Mitigation of harm

141. Mitigation of harm involves the steps that States follow to reduce the amount of harm caused by a disaster. This approach can take various forms, including requiring buildings in at-risk areas to conform to certain safety standards or the building of dykes or levees.

(a) Construction standards

142. The Algerian law proposes the mandating of construction standards in various disaster scenarios.[428] In Viet Nam, the ordinance authorizes both the enforcement of construction standards and the building of facilities such as dykes.[429] The British law identifies a number of examples of State actions that could be taken in the course of flood or coastal erosion risk management, namely removing or altering buildings and using the State's law-making power to permit, require, restrict or prevent certain activities.[430] In addition, the State has a duty to maintain a register of structures, along with information regarding the owners and the state of repair of the structures, which are likely to have a significant effect on a flood risk area.[431] This law amends the Building Act of 1984 in order to include a requirement that people working on erecting, fitting or equipping a building take measures to increase the structure's flood resistance or resilience.[432]

(b) Insurance

143. Insurance systems are another way in which States seek to mitigate harm from disaster. In 1991, India adopted the Public Liability Insurance Act, which required industries to take out insurance policies to discharge any liabilities that might arise

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[425] *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992) (holding that a South Carolina statute that prohibited a landowner from building permanent habitable structures on islands off the coast of South Carolina constituted a taking that required just compensation).

[426] Daniel A. Farber and Jim Chen, *Disasters and the Law*, pp. 211-212.

[427] Ibid.

[428] Algeria, Risk Prevention and Disaster Management Act, art. 23.

[429] Viet Nam, Ordinance on Prevention and Control of Floods and Storms and Implementation Provisions, arts. 34-35.

[430] United Kingdom, Flood and Water Management Act, art. 3.

[431] Ibid., art. 21.

[432] Ibid., art. 40.

from their activities, such as any potential environmental harms.[433] The United States has adopted a national flood insurance programme, which is designed to reduce the likelihood that people will live in flood zones, thereby reducing the risk of disaster.[434] The programme encourages individuals to move away from flood zones by requiring property owners to obtain flood insurance and increasing the cost of insurance premiums each time the owner makes flood insurance claims.[435] California has also implemented a state-specific earthquake insurance regime that operates in a similar manner.[436]

144. Although fairly few disaster risk reduction acts specify particular measures that States should or must take with regard to the mitigation of harm, all the plans include some mention of harm as a goal of the legislation, leaving the specific methods used up to the relevant authorities charged with promulgating further regulations or legislation.

3. Preparedness

145. Disaster preparedness concerns the steps that States have taken in advance of a disaster, as a matter of course, that facilitate the provision of aid once a disaster has occurred. The South African Disaster Management Act of 2002 contains a detailed definition: "emergency preparedness means a state of readiness which enables organs of state and other institutions involved in disaster management, the private sector, communities and individuals to mobilize, organize, and provide relief measures to deal with an impending or current disaster or the effects of a disaster".[437] One of the most common ways in which States have approached disaster preparedness is by establishing an institutional hierarchy of agencies or actors and defining the roles and responsibilities of those actors.

(a) Institutional framework

146. Many States' laws either include a thorough description of a new institution established specifically for the purpose of promoting disaster risk reduction policies, including disaster preparedness,[438] or entrust already existing political or non-governmental actors with additional responsibilities.[439] Often, these new hierarchies are diverse, including members from a wide variety of government ministries and, in some cases, non-governmental actors such as businesses and labour organizations. Given the emphasis on disaster management in the selected legislation, it is unsurprising that a significant portion of almost every State's law is devoted to establishing, staffing and defining the roles of new government institutions devoted specifically to addressing disasters. Of the States surveyed, Algeria is alone in not

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[433] Julian Francis, "Legal aspects of disaster management and rehabilitation", p. 248.

[434] Daniel A. Farber and Jim Chen, *Disasters and the Law*, p. 228.

[435] Ibid.

[436] Olivier Moreteau, "Catastrophic harm in United States law: liability and insurance", *American Journal of Comparative Law*, vol. 58 (2010), pp. 69 and 80.

[437] South Africa, Disaster Management Act No. 57 of 2002, art. 1.

[438] See, for example, the National Disaster Management Authority of India, created by article 3 of the Disaster Management Act, and the National Council for Disaster Reduction and Response of the Plurinational State of Bolivia, established by article 8 of the Risk Reduction and Disaster Attention Act.

[439] See, for example, Viet Nam, Ordinance on Prevention and Control of Floods and Storms and Implementation Provisions, art. 6.

defining which portion of the Government is responsible for crafting and carrying out disaster risk reduction or disaster management policies.[440] Most States not only establish a national institution and national disaster management plan, but also create decentralized parallel structures at other levels of government.[441] The Indian Disaster Management Act, for example, creates a national disaster management authority,[442] which is tasked with preparing a national plan for disaster management.[443] It also establishes State[444] and district[445] institutions tasked with implementing the national plan at the local level.

147. These institutions, in particular at the national level, tend to comprise a wide variety of government ministers and thus incorporate a broad range of subject-matter expertise.[446] In the Philippines, the National Disaster Risk Reduction and Management Council, which is headed by the Secretary of the Department of National Defence, also includes the secretaries of the Department of the Interior and Local Government, the Department of Social Welfare and Development, the Department of Science and Technology, the National Economic and Development Authority, the Department of Health, the Department of Environment and Natural Resources, the Department of Agriculture and 36 other members, including additional government bodies, regional and local representatives and private sector and civil society representatives.[447]

148. Several States decided that the Head of Government should be the principal agent of disaster management institutions, signalling the importance that they place on disaster management.[448] Sri Lanka extends this principle and includes not only the President, but also the Prime Minister and the Leader of the Opposition as the leaders of the National Council for Disaster Management.[449]

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[440] See Algeria, Risk Prevention and Disaster Management Act, arts. 50 and 52 (calling for national, regional and municipal plans for the management of disasters, but not specifying the plan's structure, composition or key components).

[441] See, for example, Plurinational State of Bolivia, Risk Reduction and Disaster Attention Act, arts. 11-12; Viet Nam, Decree No. 32-CP, (20 May 1996), arts. 3 and 7; The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), paras. 10-11; South Africa, Disaster Management Act No. 57 of (2002), paras. 22-25 and 43-50; Japan, Disaster Countermeasures Basic Act, arts. 3-5; and United States, 6 U.S.C. 317.

[442] India, Disaster Management Act, art. 3.

[443] Ibid., art. 10.

[444] Ibid., art. 14.

[445] Ibid., art. 25.

[446] See, for example, Plurinational State of Bolivia, Risk Reduction and Disaster Attention Act, art. 8; Viet Nam, Decree No. 32, art. 11; South Africa, Disaster Management Act No. 57 of (2002), para. 5; and Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, art 10.

[447] The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), para. 5.

[448] See, for example, Japan, Disaster Countermeasures Basic Act, art. 11; Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, art. 10; Colombia, National System for the Management of Risks and Disasters Act, art. 9; and Plurinational State of Bolivia, Risk Reduction and Disaster Management Act, art. 8.

[449] Sri Lanka, Disaster Management Act, art. 3.

149. Lastly, disaster management legislation also typically includes obligations that the institutions and disaster management plans are to undertake.[450] Colombia, for example, requires that the national plan develop a system for identifying and prioritizing risks, monitoring risks, communicating the existence of risks to affected populations and taking proactive steps to prevent or reduce the harm caused by disasters.[451]

(b) Funding

150. Legislation requires funding in order to allow the Government to fulfil the obligations that it has created. Within disaster management laws, States, for the most part, include some provisions relating to funding. Most States, however, do not include specific appropriations in the acts. The Algerian act contains no provisions relating to funding. Several laws establish a fund to be used for disaster management, including risk reduction.[452] In some States, such funds are authorized, but not mandated.[453] Lastly, the United States,[454] the Philippines[455] and Sri Lanka[456] each have acts that appropriate specific levels of funding to be used for disaster management. These funding provisions enable States to engage in the disaster risk reduction policies envisaged without requiring a second set of processes for budgeting.

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[450] See, for example, Plurinational State of Bolivia, Risk Reduction and Disaster Attention Act, art. 5; United States, 6 U.S.C. 318; India, Disaster Management Act, art. 10; Japan, Disaster Countermeasures Basic Act, arts. 3-5; The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), para. 6; Sri Lanka, Disaster Management Act, art. 4; South Africa, Disaster Management Act No. 57 of (2002), para. 4; Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, art. 7; and United Kingdom, Flood and Water Management Act, art. 7.

[451] Colombia, National System for the Management of Risks and Disasters Act, art. 6.

[452] Plurinational State of Bolivia, Risk Reduction and Disaster Attention Act, art. 21 (establishing a fund for the reduction of risks and economic recovery); Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, arts. 12-13 (establishing a national fund for disasters, which is to comprise funds received from the national budget and domestic and international donations); and Colombia, National System for the Management of Risks and Disasters Act, arts. 46-54 (renaming the National Fund for Calamities the National Fund for the Management of Disaster Risks and elaborating on the procedures that relate to the management of the Fund).

[453] Viet Nam, Ordinance on Prevention and Control of Floods and Storms and Implementation Provisions, art. 27; India, Disaster Management Act, arts. 46-49; Japan, Disaster Countermeasures Basic Act, arts. 94 and 101; South Africa, Disaster Management Act No. 57 of (2002), paras. 56-57; United Kingdom, Flood and Water Management Act, art. 16.

[454] United States, 6 U.S.C. 321j (authorizing the appropriation of more than $5.5 billion for the period 2004-2013).

[455] The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), para. 21 (the local disaster risk reduction and management fund is funded by no less than 5 per cent of the estimated revenue from regular sources (i.e. tax revenues), to support disaster risk management activities, with 30 per cent of this Fund allocated as a quick response fund). See also para. 23 (allocating 1 billion pesos to the Office of Civil Defence to carry out disaster risk reduction activities).

[456] Sri Lanka, Disaster Management Act, art. 16 (granting the National Council for Disaster Management starting capital of 10 million rupees).

(c) Community preparedness and education

151. Disaster preparedness involves community-level preparedness. Most States accomplish this goal through education and awareness-raising campaigns mandated by their disaster risk reduction acts. Japan, for example, specifically identifies the Japanese Red Cross Society as an organization with a special role regarding community preparedness.[457] The Philippines, by contrast, calls for disaster risk management to be introduced during secondary and tertiary education and mandates disaster risk management training and education for all public employees.[458]

152. The Indian act further recommends identifying buildings that can be used as relief centres in the event of a disaster, stockpiling food, providing information to State authorities, encouraging non-governmental organization and civil society involvement and ensuring that communications systems are in order (such as by performing drills periodically), among other tasks.[459] Japan mandates that local disaster plans provide for emergency provision, stockpiling and distribution and outline the operations relating to disaster prevention.[460] Meanwhile, Viet Nam focuses on education, establishing education programmes to promote commo.. knowledge about storms and floods.[461] The United Kingdom suggests making arrangements for financial support of individuals and providing education and guidance on risk management.[462] These States typically include only a couple of specific recommendations or requirements relating to the structure or content of such education, however.

(d) Early warning

153. Early warning was recognized by the General Assembly as an important aspect of disaster prevention as early as 1971.[463] It has been included in nearly all subsequent Assembly resolutions dealing with the subject.[464] The Economic and Social Council emphasized that early warning should be a "key element" within regional, national, and local prevention efforts.[465]

154. As noted in the Yokohama Strategy, "early warning of impending disasters and their effective dissemination ... are key factors to successful disaster prevention".[466] Early warning has been seen as an essential modality of prevention at the national, regional and international levels.[467]

155. The Hyogo Framework for Action is most explicit when it comes to early warning, naming it within its second priority for action, and suggesting the following key activities on which States might draw:

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[457] Japan, Disaster Countermeasures Basic Act, art. 2.

[458] The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), para. 4.

[459] India, Disaster Management Act, art. 30.

[460] Japan, Disaster Countermeasures Basic Act, art. 42.

[461] Viet Nam, Decree No. 32, art. 11.

[462] United Kingdom, Flood and Water Management Act, art. 3.

[463] In paragraph 8 of its resolution 2816 (XXVI), the General Assembly invited potential recipient Governments to improve national disaster warning systems.

[464] See, for example, General Assembly resolutions 46/182; 59/233, para. 7; 60/196, para. 8; 61/200, para. 9; and 63/217, para. 12.

[465] Economic and Social Council resolution 1999/63.

[466] A/CONF.172/9, chap. I, resolution 1, annex I.

[467] See, for example, General Assembly resolution 36/225.

(d) Develop early warning systems that are people centred, in particular systems whose warnings are timely and understandable to those at risk, which take into account the demographic, gender, cultural and livelihood characteristics of the target audiences, including guidance on how to act upon warnings, and that support effective operation by disaster managers and other decision makers.

(e) Establish, periodically review, and maintain information systems as part of early warning systems with a view to ensuring that rapid and coordinated action is taken in cases of alert/emergency.

...

(g) Implement the outcome of the Second International Conference on Early Warning held in Bonn, Germany, in 2003, including through the strengthening of coordination and cooperation among all relevant sectors and actors in the early warning chain in order to achieve fully effective early warning systems.

(h) Implement the outcome of the Mauritius Strategy for the further implementation of the Barbados Programme of Action for the sustainable development of small island developing States, including by establishing and strengthening effective early warning systems as well as other mitigation and response measures.[468]

156. A review of existing national early warning systems in place with outreach to communities includes the following States or areas: Anguilla, Antigua and Barbuda, Armenia, Australia, Bangladesh, Bolivia (Plurinational State of), Botswana, British Virgin Islands, Canada, Cape Verde, Cayman Islands, Chile, Colombia, Cook Islands, Costa Rica, Cuba, Czech Republic, Dominican Republic, Ecuador, El Salvador, Fiji, Finland, Georgia, Germany, Ghana, Guatemala, Honduras, India, Indonesia, Italy, Jamaica, Japan, Kenya, Lao People's Democratic Republic, Lesotho, Madagascar, Malaysia, Maldives, Marshall Islands, Mauritius, Mexico, Mongolia, Morocco, Mozambique, New Zealand, Nicaragua, Nigeria, Norway, Panama, Paraguay, Peru, Poland, Saint Kitts and Nevis, Saint Lucia, Senegal, Solomon Islands, Sri Lanka, Sweden, Switzerland, Syrian Arab Republic, The former Yugoslav Republic of Macedonia, Turks and Caicos Islands, United States, Vanuatu, Venezuela (Bolivarian Republic of) and Zambia.[469]

157. Of the 14 States selected, Algeria,[470] the Philippines[471] and India[472] each specifically provide for early warning systems, while a number of others allude to them by mentioning information sharing or prompt communication of threats. In South Africa, the State must collect and disseminate information on phenomena that cause or aggravate disasters, risk factors, early warning systems and emergency

[468] Hyogo Framework for Action, para. 17 (ii).

[469] See the compilation of national progress reports on the implementation of the Hyogo Framework for Action (2009-2011), Hyogo Framework for Action priority 2, core indicator 2.3. Available from www.preventionweb.net/english/hyogo/progress/documents/hfa-report-priority2-3%282009-2011%29.pdf.

[470] Algeria, Risk Prevention and Disaster Management Act, art. 17.

[471] The Philippines, Philippine Disaster Risk Reduction and Management Act (2010), para. 4.

[472] India, Disaster Management Act, art. 30.

response resources.[473] Nicaragua specifies the details of the State's three-tiered risk-level system as part of its early warning system.[474]

158. Early warning is, of course, not the sole province of national policy or legislation. References to that measure are found in multilateral and bilateral agreements and in decisions of judicial organs. Given its practical importance, it is deemed useful to give some examples of the manner in which early warning is dealt with by those three other sources.

159. According to the ASEAN Agreement, States should not only establish early warning systems, but also maintain and review them.[475] Part of the review could be a determination of the appropriateness of the warning system based on regular risk assessment.[476] An early warning system should have a mechanism to deliver information to people in a timely way.[477] An effort should be made to notify and educate persons within a State's territory or control on how to respond to the established early warning system.[478] The General Assembly has referred to such early warning systems as "people-centred".[479] As appropriate, States should also develop a mechanism of early warning to notify other States of the transboundary effects of hazards.[480]

160. Bilateral agreements have also provided for early warning systems. For example, an agreement between the United Kingdom and the United States concluded in 1958 provided for elements to improve early warning for the purpose of achieving "greater accuracy and timeliness in forecasts of hurricanes and in warning of accompanying destructive winds, tides, and floods".[481] Domestic practice as regards early warning is widely developed and mostly adapted to individual requirements and risk factors.[482]

161. The European Court of Human Rights has upheld the obligation to establish early warning systems. In *Budayeva*, the Court held that "the authorities' omission in ensuring the functioning of the early warning system was not justified".[483] Furthermore, the Court found there was a "causal link between the serious administrative flaws", including the lack of early warning and the death of and injuries to the petitioners.[484] In addition, although not specifically using the term "early warning", the Court also found that, under article 2 of the European

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[473] South Africa, Disaster Management Act (2002), para. 17.

[474] Nicaragua, Law Establishing a National System for the Prevention of, Mitigation of and Attention to Disasters, arts. 26-31.

[475] Art. 7 (1).

[476] Ibid.

[477] Ibid.

[478] Ibid.

[479] General Assembly resolutions 60/196, para. 8; 61/200, para. 9; and 63/217, para. 12.

[480] ASEAN Agreement, art. 7 (2).

[481] Exchange of Notes between the United Kingdom and the United States of America Constituting an Agreement for the Continued Operation of Hurricane Research Stations in the Cayman Islands established under the Agreement of 30 December 1958 as amended by the Agreement of 15 February 1960, of 23 November and 12 December 1966, United Nations, *Treaty Series*, vol. 603, No. 8735, p. 235.

[482] UNISDR, *Early Warning Practices Can Save Lives: Selected Examples: Good Practices and Lessons Learned* (Bonn, 2010).

[483] *Budayeva and Others v. Russia*, para. 155.

[484] Ibid., para. 158.

Convention on Human Rights (right to life), States had "a positive obligation to ... adequately inform the public about any life-threatening emergency".[485]

E. Proposals for draft articles

162. In the light of the foregoing, the Special Rapporteur proposes the following two draft articles:

Draft article 16
Duty to prevent

1. States shall undertake to reduce the risk of disasters by adopting appropriate measures to ensure that responsibilities and accountability mechanisms be defined and institutional arrangements be established, in order to prevent, mitigate and prepare for such disasters.

2. Appropriate measures shall include, in particular, the conduct of multi-hazard risk assessments, the collection and dissemination of loss and risk information and the installation and operation of early warning systems.

Draft article 5 ter
Cooperation for disaster risk reduction

Cooperation shall extend to the taking of measures intended to reduce the risk of disasters.

[485] Ibid., para. 131.